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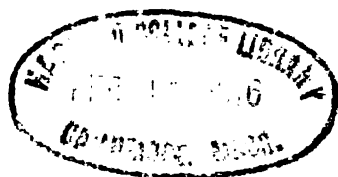
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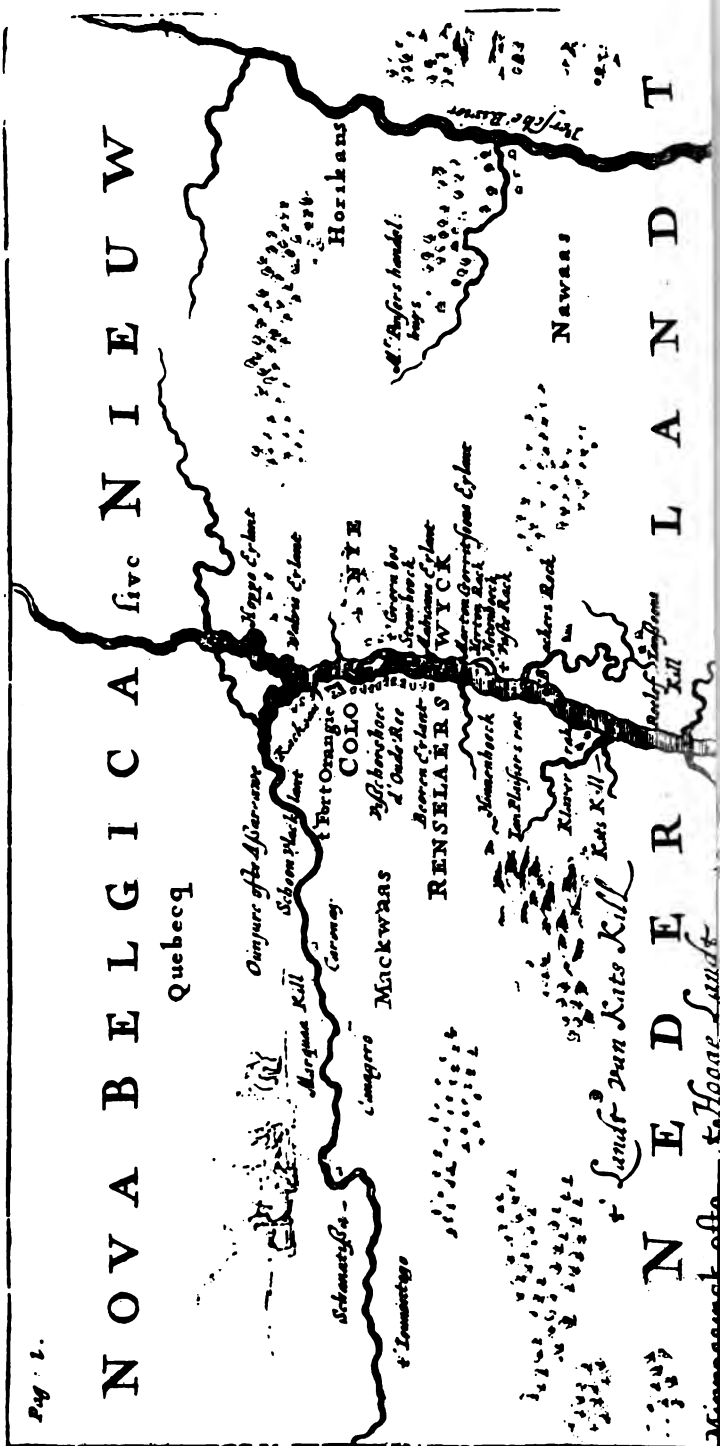
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The Museum.



EXPLORATION OF A MUNSEE CEMETERY NEAR MONTAGUE, NEW JERSEY

BY

GEORGE G. HEYE AND GEORGE H. PEPPER

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INTRODUCTION

ON the banks of the Delaware river between Port Jervis, New York, and the Delaware Water Gap, there are many village sites and a few burial places. For years it has been known that this section offered a rich field for archeological study, but prior to the explorations herein described it remained practically neglected. The shores of the river, both in New Jersey and in Pennsylvania, afford broad reaches of arable land, and along this stretch of the stream are several flat islands. The New Jersey side especially furnished suitable level places for camps and for farming, and on these numerous evidences of aboriginal habitation are found.

Dr Edward S. Dalrymple, of Branchville, New Jersey, had done some work on this site twelve or fifteen years before, and after his death a collection made by him had come into the possession of the Museum of the American Indian.

In 1913 the writers made a reconnoissance of the Delaware valley between Dingman's Ferry and Port Jervis. The most promising site for archeological excavation was found on the farm of Burson W. Bell, Esq., near the town of Montague, in Sandyston township, Sussex county, New Jersey. The results of the exploration of this burial place form the report herein presented.

The work of the Museum of the American Indian was commenced at the close of April, 1914, and was continued until early in July, when, during the writer's absence, the arrest of his men, on the charge of violating a statute prohibiting the disturbance of human burials, was caused by a local politician who believed that by keeping strangers out of his district he would gain the favor of his constituents.

The judicial history of the case, which will be of interest to future investigators of American archeology, is as follows:

On July 2d, 1914, one John Van Sickle went before Justice of the Peace John E. Whitney of Newton, New Jersey, and made a complaint against George G. Heye that he "did remove the remains of deceased persons to deponent unknown from their graves and places of sepulture in the old Minisink Graveyard in said township (Sandyston) from mere wantonness," and thereupon a warrant was issued for Mr. Heye's arrest. Mr. Heye hearing that a warrant was out for his arrest, by an arrangement with the District Attorney of Sussex County, attended at Newton with his counsel on July 20th, 1914, submitted to arrest, waived indictment and had a trial on that date before the Sussex County Court of Special Sessions, and upon said trial was convicted and sentenced to pay a fine of \$100.

Mr. Heye carried his conviction on a Writ of Error to the Supreme Court of New Jersey and the case came up on appeal before the November term of said court, which reversed the conviction in an opinion a copy of which is annexed hereto.

NEW JERSEY SUPREME COURT.
NOV. TERM, 1914.

The State,
vs.

George G. Heye,

Error to the Sussex Special Sessions Court.

Argued before Gummere, Chief Justice, and Justices Garrison and Minturn.

For the plaintiff in error, Robert S. Hudspeth.

For the State, William A. Dolan, Prosecutor of the Pleas Per Curiam:

The defendant was tried and convicted under the 148th section of the Crimes Act, which makes it a high misdemeanor for any one to remove a body of any deceased person from his grave or tomb for the purpose of dissection, or for the purpose of selling the same, or from mere wantonness.

The facts show that the plaintiff in error was an anthropologist, who, while looking for Indian relics in Sandyston township, Sussex County, came across a burial place used by the Indians who inhabited that part of the state two or more centuries ago; that he removed two or three of the skeletons which he found there for the collection of the New York Anthropological Society; about the same number for the Museum of the University of Pennsylvania; and several more for the United States Government at Washington. He did this with the consent of the owner of the land upon which these remains were found. On these facts he was convicted.

It may be that in what plaintiff in error did he violated the laws of decency

and morality, but it does not seem to us that he brought himself within the purview of the 148th section of the Crimes Act.

He certainly did not remove these skeletons for the purpose of dissection; nor was it shown that he did it for the purpose of making sale of them. His conviction was rested upon the theory that his act was one of mere wantonness. We do not think this conclusion sound. He took them for a specific purpose; and a thing done for a specific purpose, whether that purpose be one which the public generally will approve or disapprove, cannot be said to have been done in mere wantonness.

We conclude the judgment under review should be reversed.

The writer wishes to acknowledge the generous coöperation and interest taken in this work by Mr Burson W. Bell, the owner of the property on which the cemetery was situated, and to Mr Randall D. Sayre, of Milford, Pike county, Pennsylvania, who added greatly to the collection by the gift of a fine jar found by him on Minisink island directly opposite the cemetery.

G. G. H.

HISTORICAL DATA

As the part of Sussex county under consideration was probably richer in natural resources than any similar area in the State of New Jersey, from the earliest days it has furnished material for historical accounts, and the archives of the state are replete with documents which record the troubles between the native tribes and, at a later period, the inroads of white settlers. The region which particularly concerns us here comprises the townships of Sandyston and Montague in the northwestern corner of Sussex county (fig. 1). James P. Snell, in his *History of Sussex and Warren Counties*, pp. 361-362, published in 1881, says:

The Minisink patent, of historic memory, embraced the valuable lands of Montague, lying along the banks of the Delaware, and their fertility and natural advantages early attracted to this favored locality the Dutch settlers from Esopus. The township was thus made memorable soil before the white man had cleared the forests in other portions of the county. From the easy fords at the Minisink, Indian trails diverged, —west to the Wyoming Valley, along the Susquehanna River; north, by short cut across the peninsula of Pike County, to the mouth of the Lackawaxen, on the Delaware; south, through Culver's Gap, to the ponds and

hunting-grounds of the Kittatinny valley; and northeast, via the Delaware, to the Machackemack River and corresponding valleys.

The most valuable portion of the famous "Minisink patent" lay within the boundaries of Montague. It embraced that fertile tract of land extending from the mouth of the "Machackemack" at Carpenter's Point,

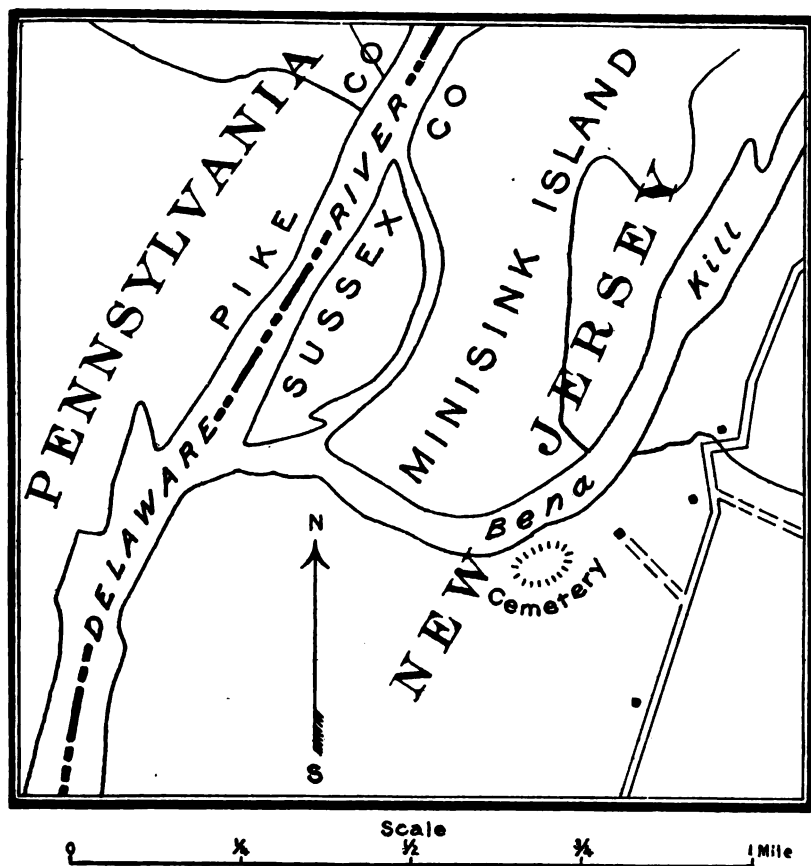


FIG. 1.—Map showing the location of the Minisink cemetery.

down the left bank of the Delaware River to the lower point of "Great Minisink Island." This patent covered the two largest and most fertile islands of the Delaware River, with the adjoining flats along the Jersey shore,—Mashipacong Island, lying between Carpenter's Point and the Brick House, and Minisink Island, lying below the Brick House. These

two islands alone contain 1000 acres of cultivated land, and, together with the shore flats and grazing-lands between the extremes named, more than 10,000 acres of the quality of land so highly prized by the Low-Dutch settlers was included in the Minisink patent. The settlement first made was located opposite the lower end of the Island (which gave name to the patent referred to), upon the higher portion of Minisink flats, just at the foot of the ridge on the south running parallel with the river. This settlement took the name of Minisink. A small grist-mill was erected upon the stream which here discharges its waters into the Bena Kill, between the residences of Daniel D. Everitt and Jacob Westbrook, Esq., the former residence being within the township of Montague and the latter in that of Sandyston, as this stream here forms the boundary line between these townships for a short distance from the river. Johannes Westbrook settled upon one side of this small stream of water, and Daniel Westfall (said to have been his son-in-law) upon the opposite bank, where Mr. Everitt now resides. The Westbrook family was early represented by three brothers, who located at Minisink soon after 1700.

The precise period at which the Dutch and Huguenot settlers entered the Minisink valley is uncertain. We have positive documentary evidence that there was a considerable colony of settlers at the Neversink and in the Minisink valley, including both of the Minisink Islands, prior to the beginning of the eighteenth century. A voting precinct, with a municipal organization, was laid off there before this date, which implies a considerable number of voters; and by an act of the Provincial Assembly of New York, passed Oct. 18, 1701, "for the more Regular proceedings in the Election of Representatives," the "inhabitants of Wagachemick (Neversink) and Great and Little Minisink (Islands)" were "empowered to give their votes in the County of Ulster." The evidence clearly substantiates the fact that there were many settlers in the Jersey Minisink previous to 1700.

The Indians which occupied this area were the Munsee, with possibly a few Unami, both divisions of the Delawares. According to the *Handbook of American Indians*¹—

The Munsee [whose name, according to Hewitt, is derived from *Min-asin-ink*, 'at the place where stones are gathered'] originally occupied the headwaters of Delaware river in New York, New Jersey, and Pennsylvania, extending south to Lehigh river, and also held the west bank

¹ *Bulletin 30, Bureau of American Ethnology*, pt. 1, Washington, 1907.

of the Hudson from the Catskill mountains nearly to the New Jersey line. They had the Mahican and Wappinger on the north and east, and the Delawares on the south and southeast, and were regarded as the protecting barrier between the latter tribe and the Iroquois.

Their council village was Minisink, probably in Sussex county, New Jersey. . . . The Minisink formed the principal division of the Munsee, and the two names have often been confounded. . . . By a fraudulent treaty, known as the 'Walking Purchase,' the main body of the Munsee was forced to remove from the Delaware about the year 1740, and settled at Wyalusing on the Susquehanna on lands assigned them by the Iroquois. Soon after this they removed to Alleghany river, Pennsylvania, where some of them had settled as early as 1724.

About 1720 the Iroquois assumed dominion over them, forbidding them to make war or sales of lands, a condition which lasted until about the opening of the French and Indian war. Many of them had originally removed from the west bank of Delaware river to escape the inroads of the Conestoga.

E. M. Ruttenber,¹ writing of the Minisink, says:

West of the Esopus country, and inhabiting the Delaware and its tributaries, were the *Minsis* proper of whom a clan more generally known as the *Minnisinks* held the south-western parts of the present counties of Orange and Ulster, and north-western New Jersey. Van der Donck describes their district as "Minnessinck of 'tLandt van Bacham," and gives them three villages: Schepinaikonck, Meochkonck, and Macharienkconck,² the latter in the bend of the Delaware opposite Port Jervis, and preserved perhaps in the name Mahackemeck. On Sauthier's map, Minnisink, the capital of the clan, is located some ten miles south of Mahackemeck, in New Jersey. Very little is known of the history of the clan as distinguished from the tribe of which they were part, although the authorities of New York had communication with them, and the missionary, Brainerd, visited them. Tradition gives to them the honor of holding the capital of the tribe in years anterior to the advent of the Europeans.

In a later work³ Ruttenber describes the town and the tribe as follows:

¹ *History of the Indian Tribes of Hudson's River*, Albany, 1872, p. 96.

² On the original map of Van der Donck (see our pl. 1) these names are spelled Meoechkonk, Mecharienkconck, and t'Schepinaikonck, respectively.

³ *Footprints of the Red Men. Indian Geographical Names in the Valley of the Hudson River*, 1906, pp. 220-222.

Minisink, now so written and preserved as the name of a town in Orange County, appears, primarily, in 1656, on Van der Donck's map, "Minnessinck ofte t'Landt van Bacham", which may be read, constructively, "Indians inhabiting the back or upper lands," or the highlands. Heckewelder wrote: "The *Minsi*, which we have corrupted to *Monsey*, extended their settlements from the Minisink, a place named after them, where they had their council seat and fire," and Reichel added, "The Minisinks, *i. e.*, the habitation of the Monseys or Minsis." The application was both general and specific to the district of country occupied by the Minsi tribe and to the place where its council fire was held. The former embraced the mountainous country of the Delaware River above the Forks or junction of the Lehigh Branch; the latter was on Minnisink Plains in New Jersey, about eight miles south of Port Jervis, Orange County. It was obviously known to the Dutch long before Van der Donck wrote the name. It was visited by Arent Schuyler, a credited interpreter, who wrote, in his Journal, Minissink and Menissink as the name of the tribal seat. Although it is claimed that there was another council-seat on the East Branch of the Delaware, that on Minisink Plains was no doubt the principal seat of the tribe, as records show that it was there that all official intercourse with the tribe was conducted for many years. Schuyler met sachems and members of the tribe there and the place was later made a point for missionary labor. Their village was palisaded. On one of the early maps it is represented as a circular enclosure. In August, 1663, they asked the Dutch authorities at New Amsterdam, through *Oratamy*, sachem of the Hackinsacks, "For a small piece of ordnance to use in their fort against the *Sinnakas* and protect their corn." (Col. Hist. N. Y., XIII, 290.) In the blanket deed which the tribe gave in 1758, to their territory in New Jersey, they were styled "Minsis, Monseys, or Minnisinks." *Minsis* and *Monseys* are convertible terms of which the late Dr. D. G. Brinton wrote: "From investigations among living Delawares, *Minsi*, properly *Minsiu*, formerly *Min-assin-iu*, means 'People of the stony country,' or briefly, 'Mountaineers.' It is the synthesis of *Minthiu*, 'to be scattered,' and, *Achsin*, 'stone,' according to the best native authority."

In writing of "The Indians under the English," Ruttenber¹ says:

The *Minnisinks* hesitated at first to embark in the war [of 1688], and sent Paxinos, their chief, to New York to consult with Governor

¹ *History of the Indian Tribes of Hudson's River*, p. 178.

Dongan in regard to the matter.¹ They subsequently contributed their quota, however, and rendered important service.

At the outbreak of the war the *Shawanoes* were contesting the advance of the *Iroquois* in the South, and were also engaged in war with the *Cherokees*. In the latter they suffered severely, and but for the timely aid of the *Mahicans*, would have been destroyed. The *Lenapes* [Delawares] invited them to remove to their country; the invitation being accepted, the *Minsis* brought the matter to the attention of the government of New York, in September, 1692, on an application to permit their settlement in the Minnisink country. The council gave its assent on condition that they should first make peace with the Five Nations.² This was soon effected, and the messengers departed, accompanied by Arnout Vielle, an interpreter, and three Christians, to visit the country of the *Shawanoes* and consummate the transfer. . . . Captain Arent Schuyler visited the *Minnisinks* in February, and there learned that the *Shawanoes* were expected early in the ensuing summer. This expectation was realized.³

The following journal of Captain Arent Schuyler's visit to the Minisink country⁴ in 1693 or 1694 is given in full, as it is the first account of an official visit to this section.

Journal of Captain Arent Schuyler's Visit to the Minisink Country.
May it pleas your Excell.

In persurance to y^r Exc^{ll}: commands I have been in the Minnissinck Country of which I have kept the following Journall: viz^t

169 $\frac{3}{4}$ y^e 3^d of Feb: I departed from New-Yorke for East New-Jersey and came that night att Bergentown where I heired two men and a guide.

y^e 4th Sunday. Morning. I went from Bergen & travilled about ten English miles beyond Haghkingsack to an Indian place called Peckwes.

y^e 5th Monday. From Peckwes North and be West I went about thirty-two miles snowing and rainy wether.

¹ This the author amplifies by the following note: "'Ordered, that a message be sent to Minnisinks, to order them to send up their young men to Albany to join with the Five Nations against the French.'—*Council Minutes*, May 6, 1688."

² River Indians returned from a residence with the *Shawanoes*, brought with them some *Shawanoes* who intended to settle with the *Minnisinks*, asking permission to that end. Council directed that the *Shawanoes* must first make peace with the Five Nations.—*Council Minutes*, Sept. 14, 1692."

³ Rutenber, *History of the Indian Tribes of Hudson's River*, pp. 180-181.

⁴ *Documents Relative to the Colonial History of the State of New York*, vol. iv, pp. 98-99, Albany, 1854.

y^e 6th Thusday. I continued my Journey to Maggaghkameck¹ and from thence to within half a days Journy to the Mennissinck.

y^e 7th Wendsday. About Eleaven a Clock I arrived att the Minnisinck, and there I mett with two of ther Sachems and severall other Indians of whome I enquired after some news, if the French or their Indians had sent for them or been in y^e Mennissinck Country Upon wth they answered that noe French nor any of the French Indians were nor had been in the Mennissinck Country nor there abouts and did promise y^t if y^e French should hapen to come or y^t they heard of it that they will forthwith send a mesinger and give y^r Excellency notice thereof.

Inquireing further after news they told me that six days agoe three Christians and two Shañwans Indians who went about fifteen months agoe with Arnout Vielle into the Shañwans Country were passed by the Mennissinck going for Albany to fech powder for Arnout and his Company; and further told them that s^d Arnout intended to be there wth seaven hundred of y^e said Shañwans Indians loaden wth beavor and peltries att y^e time y^e Indian Coarn is about one foot high (which may be in the month of June.)

The Mennissinck Sachems further s^d that one of their Sachems & other of their Indians were gone to fech beavor & peltreis which they had hunted; and having heard no news of them are afraid y^t y^e Sinneques have killed them for y^e lucar of the beavor or becaus y^e Mennissinck Indians have not been wth y^e Sinneques as usiall to pay their Dutty, and therefore desier y^t your Exc^{ell}. will be pleased to order y^t the Sinneques may be told, not to molest or hurt y^e Mennissincks they being willing to continue in amity with them.

In the afternoon I departed from y^e Minnisincks; the 8th, the 9th, & 10th of Feb. I travilled and came att Bergen in y^e morning and about noone arrived att New Yorke.

This is may it pleas your Exc^{ell}. the humble reporte off your Excellency's most humble servant.

ARENT SCHUYLER.

Another early reference to the Minisink village appears in the work of Thomas Budd,² published originally in 1685:

¹ The Indian name of the river Neversink, which falls into the Delaware, a little south of Port Jervis, Orange County, New-York. *Eager's History of Orange County*, 392.—ED.

² *Good Order Established in Pennsylvania & New-Jersey in America*. Reprinted, Cleveland, 1902. p. 26.

From the Falls of Delaware River the Indians go in Cannows up the said River, to an Indian Town called Minisincks, which is accounted from the Falls about eighty Miles; but this they perform by great Labour in setting up against the Stream; but they can come down with ease and speed; the River from the Falls runs from the North and North-West and about twenty miles, as I my self observed in my Travel so far by the River, but by the Indians Information, it cometh about more Easterly farther up. I have been informed, that about Minisincks, by the River-side, both in New-Jersey and Pennsylvania is great quantities of exceeding rich open Land, which is occasioned by washing down of the Leaves and Soil in great Rains from the Mountains, which Land is exceeding good, for the raising of Hemp and Flax, Wheat, or any other sorts of Corn, Fruits, Roots &c.

In the second edition of Adriaen Van der Donck's *Beschryvinge van Nieuw-Nederlandt*, published at Amsterdam in 1656, appears a map of "Nova Belgica sive Nieuw Nederlandt" (see our pl. 1). On the Zuydt Rivier (the South or Delaware), at a point some distance south of and on the same side as the town called Mechari-enkonck, there is a locality designated "t'Schichte Wacki" on the map. This is the exact situation of the Minisink town. The meaning of the full name is unknown, but *wacki* signifies "place of." Ruttenber,¹ in speaking of the Minisink, says: "Their village was palisaded. On one of the early maps it is represented as a circular enclosure."

Incorporated in a work published in 1747² is a map showing an old Indian trail extending from Navesink, on Shrewsbury river, just south of Sandy Hook, to the bank of the Delaware, ending at a point opposite Minisink island at approximately the place where Minisink village and its burial place were situated. This trail, as shown on the map, is called "Minisink Path. Indian Path from Navesink to Minisink." Minisink island is likewise shown. This is another indication that Minisink was the most important settlement of the tribe, probably its council village.

¹ *Footprints of the Red Men*, op. cit., p. 221.

² *A Bill in the Chancery of New Jersey at the Suit of John Earl of Stair, and others, Proprietors of the Eastern-Division of New Jersey against Benjamin Bond and some other Persons of Elizabethtown, Distinguished by the Name of the Clinker Lot Right Men.* With three maps. New York, James Parker, 1747.

Faden's map of The Province of New Jersey¹ places "Minising" at the mouth of the small stream which is given the name of "Minising Creek or West Brook." The town is represented by three small pyramids. "Minising Island" is also shown.

The Minisink village is noted, with varied orthography, on a number of early maps, but the only one that indicates what might have been intended as a symbol for a circular enclosure is that of Sauthier,² dated 1779, which represents the village by means of a small circle surrounded by five pyramidal figures; the circle, however, is such as is generally employed for indicating any village. This cartographer locates the Minisink settlement on the northern bank of a small unnamed stream that flows into Bena Kill at this point.

On a Historical Map of Pennsylvania³ there is shown on the Delaware river, opposite Minisink island, at approximately the place where the cemetery stood, three parallel marks, and "Mine-sink I. T.," meaning Indian town. The island is given as "Minising Island."

It should here be noted that the names of abandoned villages were frequently retained on early maps as if the settlements themselves were still inhabited.

PREVIOUS ARCHEOLOGICAL WORK IN THE VICINITY

L. W. Brodhead⁴ gives a description of graves opened in a cemetery near the Delaware Water Gap. He says:

The following extracts from a letter written by a gentleman who, with others, visited the Indian burial-place near the Gap, in the autumn of 1865, is deemed not out of place in this connection. The letter was published in the *North American and United States Gazette*: "Various

¹ Faden, *North American Atlas*, London, 1777.

² *A Chorographical Map of the Province of New York in North America*, London, January 1st, 1779.

³ *Historical Map of Pennsylvania showing the Indian Names of Streams and Villages, and Paths of Travel*, etc., edited by P. W. Sheaffer, and others. Publication Fund of the Historical Society of Pennsylvania, Philadelphia, 1875.

⁴ *The Delaware Water Gap: Its Scenery, its Legends and Early History*. Second ed., Philadelphia, 1870, pp. 115-124.

localities of interest are pointed out as the sites of Indian villages and burial-grounds. . . . One of these early cemeteries has long been regarded with interest by visitors to the Gap and residents of the neighborhood. In vain, however, did those desirous of exploring it apply for permission to the proprietor of the soil. But . . . certain parties met, not having the fear of Mr. Zimmerman . . . before their eyes, and under the cover of night and a dense young forest, perpetrated that which men of science had ineffectually attempted. It may not positively be known what articles have been taken from the despoiled graves, but I have been informed that among the articles found was a finely wrought stone pipe. With this digression, I will give a brief account of our operations to-day. We found the cemetery composed of numerous 'graves,' in close proximity to one another. These were scarcely distinguishable, so slight is the elevation. Each grave is encircled by a trench, and a group of some half a dozen had evidently been surrounded by a gravel ditch. The circumvallation was quite distinct. Selecting an undisturbed spot, we put a couple of stout men to work. Removing the soil, we were convinced human agency had been at work. Instead of the gravel, which marks the diluvial, we found a coarse yellow sand, intermingled with clay. At the depth of about two and a half feet, we found an ulna, or some other parts of a human frame. The skeleton was in tolerable preservation. The cranium is in good condition, with the exception of a portion of the right superior maxillary, which appeared missing. The teeth are in good preservation, but much worn by the use of maize. The sections indicate a person of about middle age. The frame was large, and doubtless that of a male. The mode of burial had been by inhumation; placing the body in a recumbent posture, extending from east to west, the face looking eastward. A slight cist had been excavated, which received the body, free from cement or stone incasement, and having placed with it the few personal articles which ornamented it in life, a careful covering of sand was made to the height of the cist, and terminating in a small tumulus. The sand had evidently been carried from the river's beach, as it is not found at a nearer point. This is a peculiarity, and worth attention. Of the articles of personal adornment recovered were parts of two metallic ornaments, brooches, or ear-drops, found in close proximity to the head. They are an alloy, pewter perhaps, circular in form, and two inches in diameter. Also, two spiral wire springs of brass, one inch in length and half an inch in diameter, and three bone or shell beads, one quite large. These are by far the most valuable and interesting relics recovered, as they are purely aboriginal, while the metallic articles

are of European fabrication. In addition to those discovered was the rude form of a pocket-knife, but so oxidized as to be almost undistinguishable. Of course, these articles, with the exception of the bone beads, are of white men's manufacture, and utterly valueless to the archaeologist."

We incorporate the following extract from *Bulletin 40 of the New York State Museum* concerning archeological work conducted by that institution in 1909:

In September the assistant in archeology was sent to Port Jervis to excavate the site of a Minsi village and burial ground . . . Little or nothing is known regarding the archeology of the Minis nor was it possible to determine from an examination of the Port Jervis site much concerning their culture except in the line of their mortuary customs.

The Van Etten site, the site of the Minsi village and burial place is found on the Levi Van Etten farm on the east bank of the Minisink river, two miles from Port Jervis. Excavations conducted during the months of September and October, 1909, by the assistant in archeology resulted in the discovery of 30 graves and several hearths and refuse pits. The latter contained little of interest, only a few potsherds and rude flints being found with them. An examination of the burials proved that the Minis had for some time been influenced by the white men about them. Some of the skeletons seem to have been buried in rough wooden boxes. The position of all skeletons found in what appeared to be the remains of boxes was the extended position instead of the flexed position generally found in old burials in this State. Most of the objects found in the graves were of European origin. These objects include beads of several sizes and shapes, brass and iron finger rings, brass bracelets, brass bells of two forms, one bronze soup spoon, one clay pipe stamped R. Tippet, and brass buttons. The aboriginal artifacts found in the graves were all shell ornaments, probably pendants or gorgets.

In 1872 Ruttenber¹ described this site as follows:

On the east bank of the Neversink river, three miles above Port Jervis, on the farm now or late of Mr. Levi Van Etten, exists an Indian burial ground, the graves covering an area of six acres. Skeletons have been unearthed, and found invariably in a sitting posture, surrounded by tomahawks, arrow-heads, etc. In one grave was found a sheet iron tobacco box containing a handkerchief covered with devices, employed doubtless to preserve the record of its owner's services.

¹ *History of the Indian Tribes of Hudson's River*, Albany, 1872, p. 96.

SITUATION OF THE MINISINK CEMETERY

From the foregoing historical data it is evident that the burial place excavated by the Museum of the American Indian belonged to the Munsee and that it was near the site of Minisink. The cemetery is on what was originally the Westbrook estate in Sandyston township, but is now owned by Burson W. Bell, Esq., who married a descendant of the Westbrooks, the property having remained in continuous possession of the family for seven generations. The site lies four miles southwest of the Milford toll-bridge, on both sides of the historic "Mine road," the portion on which the cemetery was situated stretching from this highway to the bank of Bena Kill, which forms the eastern boundary of Minisink island.

For many years the Bell farm has been noted in connection with a so-called "Indian fort," situated a short distance from the Bena Kill, which is merely the ruin of an old stone house said to have been used by the settlers in repelling attacks of Indians. Many evidences of Indian occupancy have been found on the surface, and about twenty years ago Dr Edward S. Dalrymple, of Branchville, New Jersey, unearthed a number of skeletons in a sandy plain near the bank of the creek. Since that time Mr Westbrook, Mr Paul Tooker of Westfield, New Jersey, and others have dug into the burial place, and four years ago Mr Bell, the owner of the farm, in plowing on the opposite or sloping side of the hill, unearthed the skeleton of a child with which were several shell ornaments as well as objects of European manufacture.

The cemetery proper is on the south bank of the Bena Kill, opposite the lower end of Minisink island. At this point the creek bluff is about thirty feet in height. Near the bank the surface is level, but it stretches inland, forming a series of low sand-dunes. The eastern end of the burial area has the appearance of a low, broad mound, and for convenience of reference it will be known as such in this paper. A few hundred feet east of the mound are a series of higher dunes having the form of ridges: these are at the lower edge of the plateau that extends to the base of the range which parallels the river.

The mound presented no physical indication of its use as an

aboriginal cemetery. It extends several hundred feet from the bank of the stream, but only the portion nearest the creek was utilized for burial purposes. It is a natural sand-dune, similar to the dunes of greater or lesser height that extend for miles along the New Jersey bank of the Delaware, but when examined by our party numerous stone implements and potsherds were found on its surface. On the crest of the mound, fragments of human bones, including portions of skulls, and parts of tubular shell beads were found. These had been upturned by the plow, thus indicating the shallowness of some of the burials.

Max Schrabisch, in his "Indian Habitations in Sussex County, New Jersey,"¹ describes Minisink island and also the village site on the mainland. Concerning Minisink island, he says:

This island lies about 15 feet above normal water level of Delaware River and is practically level. There was a camp site and fishing place at its northern end, where arrow-points of flint and jasper as well as net sinkers of a type quite common in Delaware Valley and usually consisting of flat oval pebbles notched on opposite sides were once fairly abundant. Situated as it is in the immediate neighborhood of the Great Minisink village and separated from it only by the river channel, it may seem strange that it was apparently the site of only one camping ground, although the fact that it is flooded wholly or in part in periods of high water probably accounts for this. However, scattered relics were found in at least two places.

Continuing, he speaks of the village as follows:

The Great Minisink village was situated directly south of Minisink Island on high level land overlooking Delaware River. Artifacts of every description have been found here, and many of them are now in Burson Bell's collection. . . . A burial ground adjoins the village site, many of the graves encroaching upon and intermingling with the lodge sites.

In speaking of the discoveries made by Mr Bell, he writes:

One grave discovered accidentally by Mr. Bell while ploughing, contained some extraordinary rare objects, exhibiting the highest degree of workmanship ever attained by the Lenni Lenâpé. Along with a piece

¹ *Bulletin 13, Geological Survey of New Jersey*, 1915, pp. 28-30.

of burnt mica, a piece of zinc, a stemmed jasper scraper and twelve dark blue beads, he found eight white stone tubes, one-quarter of an inch in diameter and from two to four inches long, used perhaps by the medicine man to draw disease from the sick. But the *pièce de résistance* were two exquisitely carved ornaments of an immaculate white color, representing hawks or eagles. These ornaments, designated as ceremonial objects (bannerstones), mark perhaps the grave of a chief and are now in Bell's collection.

The shell birds mentioned by Mr Schrabisch, now the property of the Museum of the American Indian, are herein described and illustrated (figs. 12, 13). Mr Schrabisch gives two crudely drawn and rather misleading sketches of these ornaments, which he designates "bannerstones." The "stone tubes," also in the Museum of the American Indian, are in reality shell ornaments, under which caption they are described in the present paper.

PREVIOUS WORK IN THE CEMETERY

Dr Dalrymple evidently did considerable digging in the northwestern part of the mound, but, so far as known, no measurements or photographs were taken. His investigations proved that the Indian inhabitants had been in contact with white settlers and that some of the bodies had been buried within the historical period. There is sufficient evidence to show that at least fifteen skeletons were exhumed by this investigator. With one of the bodies, that of a child, was a copper kettle; a silver spoon; a necklace composed of two shell beads, two glass beads, eleven thimbles, and one bell, tied to which were the remains of a deerskin thong; a bone comb; and eight copper bracelets which



FIG. 2.—Bone comb found by Dr Dalrymple.

were found on the right wrist. Graphite and animal bones also were found in the grave. The skeleton lay 18 in. beneath the surface, the skull directed S.

The bone comb found in this grave is shown in figure 2; it measures $3\frac{1}{2}$ in. in height and $1\frac{3}{8}$ in. in width. The upper part is ornamented with the figure of a wolf or a dog. The neck and head of the animal are carved in the round, the shoulders project, and the legs are in low relief. Similar combs are not uncommon in Iroquois sites in the State of New York.

With most of the skeletons exhumed by Dr Dalrymple nothing was found; with one, however, there was a pewter pitcher, a pair of copper ear-ornaments, and seven shell beads.

INVESTIGATIONS BY THE MUSEUM OF THE AMERICAN INDIAN

Owing to the fact that human remains had been removed from various parts of the mound, a series of test trenches were dug. The first, extending through the southeastern edge, gave no indication of disturbed soil. The second trench was dug nearer the eastern exposure, and it was here that the first indications of burials were encountered. From this point trenches were dug to the extreme northwestern part of the burial area, and ultimately the greater part of the mound was excavated. The position of each burial is shown on the accompanying plan (pl. II).

THE BURIALS

The first evidence of disturbed earth was noted at the central part, just below the surface soil and extending to a depth of 4 ft. 8 in., its greatest width being 2 ft. 6 in. At a depth of 2 ft. 6 in., half of a pitted hammerstone, split by fire, was found. Just above, at the edge of this disturbed soil, was a large piece of deer antler. There were traces of charcoal in this pit, but no evidences of a burial.

A second pit was encountered near this one; in size it was practically the same as the one just described. In it, at a depth of 2 ft. 1 in., a pestle and a flat stone were found.

Following is a description of the burials uncovered during the excavations in the cemetery.

pelvis the skeleton was complete. The upper part of the pelvic bone was only $3\frac{1}{2}$ in. beneath the surface. Nothing was found with this burial.

Skeleton 6, an adult, undisturbed, lay on its right side, the legs flexed, the arms bent upward, the hands under the chin. The top of the cranium was 14 in. below the surface. Under and around the hands and beneath the chin were a large number of small glass beads, and also under the chin were two small pieces of chipped flint. Above the neck were thirty-seven large, spheroidal, glass beads, and two beads made of olivella shells. A few inches from the occiput a flat piece of limestone was found. Between the arms and just below the point of the chin were two clay pipes of European manufacture (pl. IV, *a*; XIV, B, *a*, *e*). Two feet west of the skeleton were evidences of a feast-pit, shown by a discolored area, irregular in shape, in which were found pieces of charcoal, fragments of split animal bones, two potsherds, and three arrowpoints.

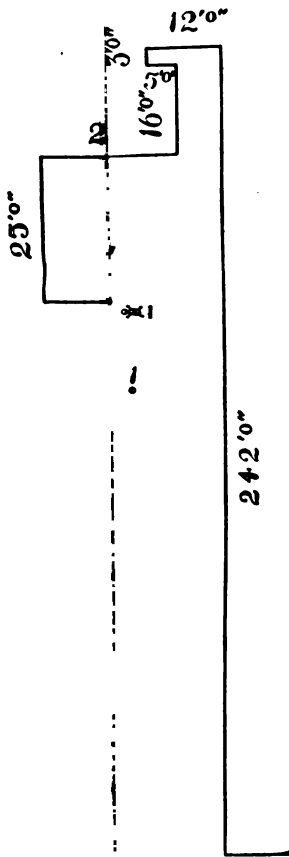
Skeleton 7, a child, was on its back, with arms against the sides and legs extended. The skull was crushed, as if a heavy weight had pressed upon the frontal bone. The body lay NE by SW, the head toward the SW, 13 in. below the surface. About the neck and under the chin were twenty-one small, black, glass beads, a large bead of white glass, and six shell disc-beads. The disc-beads were lying in a row with the glass beads between them. Between two of the disc-beads were four of glass, each pair being connected with a small, dull-green, tubular bead of copper, the salts of which had preserved the cord, thereby holding the beads, which formed a necklace, in their original position. The restored necklace is shown in plate VIII, *a*. A photograph of the skeleton is reproduced in plate IV, *b*.

Skeleton 8, that of an adult, was lying NE by SW, with the head in the latter direction. The skull, which was broken, together with the upper part of the vertebræ, had been displaced, and the bones of the lower part of the body had likewise been disturbed. The body was lying on its back, with arms extended. Within two inches of the cervical vertebræ was a deposit of wire ornaments and five tubular shell beads, and the remains of what seemed to be

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CONTENT OF THE EXCAVATION

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a. SKELETON 6 WITH EUROPEAN CLAY PIPES



b. SKELETON 7, AN EXTENDED BURIAL

a rush bag, in which evidently the objects had been buried. The shell beads lay under the mass and rested on a piece of bark. At the ends of some of the shell beads were two glass beads, as shown in plate v, *b*; others had but one glass bead at the end. As there were ten glass beads in the deposit, it is probable that the beads had formed a necklace and that two glass beads alternated with the shell tubes. The wire pieces were in the form of flat coils, but were broken and corroded to such an extent that their original form could not be determined. From the position and condition of the deposit, and from the fragments of fiber found above and below the objects, it would seem that the ornaments had been wrapped in a piece of bark, or placed in a fiber bag which was then wrapped in bark. In removing the cranium a shell pendant (fig. 8, *a*) was found. The upper part of the cranium was discolored by contact with red paint, pieces of which still adhered to it. Another portion of the cranium was stained with copper salts, but the metal that caused it had disappeared. (Pl. v, *a*.) Southeast of the leg-bones and joining the burial was a feast-pit extending to a depth of one foot below the skeleton. In this pit, and nearly a foot below the level of the leg-bones, a large piece of the rim of a jar was found, likewise a number of chipped stones, and deer-bones that had been cracked evidently for the purpose of extracting the marrow. Throughout the pit were pieces of charcoal, and above the objects mentioned were numerous animal bones, potsherds, and a broken drinking-cup made of the carapace of a box-turtle.

Skeleton 9, an adult, $7\frac{1}{2}$ in. below the surface, lay NE by SW, on its right side, the legs flexed, and the skull directed SW. The left arm was in front of the face, the hand under the chin. There were no accompaniments.

Skeleton 10, a child, was found 16 in. below the surface. The skull lay with the occiput toward the south; the other bones were grouped about and under it, the major portion being on the northern side of the skull, thereby showing that, like most of the other burials, the body had been interred with the head toward the SW. The skull, a few of the vertebræ, and the ribs, were the only bones present. This may have been a reburial, which would account

for the missing parts. Under the chin were three triangular shell pendants (fig. 8, *b-d*), and a shell ornament shaped like a porpoise (fig. 15). Sixty-five glass beads were found with the pendants.

Skeleton 11 was that of an adult. The bones had been disturbed; the skull lay at the southwestern end of the scattered bones. Many of the vertebræ were ankylosed. Deer-bones and charcoal were found intermingled with the bones of the skeleton, but these evidently were the remains of a feast, as there was a feast-pit immediately northeast of and in juxtaposition to the skeleton, in which were two large pieces of a pottery jar, evidently in their original positions. One of the leg-bones of the skeleton lay just above the pottery, but no doubt it had been forced out of place when the other bones were disturbed. Above and around the sherds of the jar were pieces of charcoal and animal bone.

Skeleton 12 was that of an adult, the skull of which was 14 in. below the surface. The body was lying on its back, with legs extended; the arms lay parallel with the sides of the body, and the hands rested on the pelvis. The tibiæ, fibulæ, and foot-bones had been disturbed. The skull, which was directed SW, had been crushed, but was lying in its natural position, with the lower jaw in place. No artifacts were found with this burial. The discolored sand continued west of the skeleton, but there were comparatively few animal bones in it.

Skeleton 13, an adult, the skull 11 in. below the surface. The body lay on its right side, with the legs flexed and the skull toward the SW. The arms were bent upward; the hands rested against the chin. A bear-tooth, found directly beneath the skull, was the only accompaniment of this burial.

Skeleton 14, a child, with the skull 13 in. below the surface. The body lay on its back, with legs extended and with the arms at the sides. The skull, which was crushed, was directed SW. A piece of limestone rested on the chest. The bones of the skeleton had been disturbed.

Skeleton 15, a child, 18 in. below the surface. The bones were scattered and the cranium was missing. There were no burial accompaniments.



a. SKELETON 8 WITH DEPOSIT OF ORNAMENTS NEAR SHOULDER



b. BEADS AND WIRE ORNAMENTS WITH SKELETON 8

Skeleton 16, a child, 17 in. below the surface. The cranium had been crushed. The body lay extended on its back, the skull directed S. A small flat stone was found under the jaw.

Skeleton 17, a child, the skull 20 in. below the surface. The body was on its back, with legs extended and the head pointing SW. Under the jaw were nine tubular beads and one spherical shell bead, also many small glass beads, and eighteen beads of yellow glass made to represent grains of corn.

Skeleton 18, a young child, lying on its back, with legs extended. The skull, which had been crushed, was toward the SW and lay $6\frac{1}{2}$ in. beneath the surface. A few inches below the jaw and resting on the upper ribs was a bird ornament of shell (fig. 10). About the neck were a number of small glass beads, and nine cylindrical shell beads. This body had been interred over another (*Skeleton 19*)—the only instance of a superimposed burial in the mound.

Skeleton 19, which lay 14 in. below *Skeleton 18*, was that of an old person. The body evidently had been lying on its side, with legs flexed and the head toward the SW. The skull had fallen from its normal position and lay nine inches below the cervical vertebrae; the occiput was upward and the lower jaw a few inches above it.

Skeleton 20 is that of a white man of the Scandinavian or Nordic type. It was buried on its right side, with legs flexed. The cranium was 11 in. below the surface and was directed SW. The bones were in their normal positions, but most of them, including the skull, had been broken, as though by pressure. In the mouth cavity a piece of rock crystal was found.

Skeleton 21, an adult, 8 in. below the surface. The bones, especially the skull, were broken and disturbed, but the general position showed that the head had been toward the SW. Nothing was found with the burial.

Skeleton 22, a child, lay on its back, 8 in. below the surface. The skull had been crushed, and the bones were broken and scattered, but the head had been toward the SW. Nothing was found with this burial.

Skeleton 23, an adult, lying on its left side with arms and legs

flexed, and with the hands above the head. It was 16 in. below the surface; the head was directed SW. There were no accompaniments.

Skeleton 24, an adult, 10 in. below the surface; lying on its back, with head toward the SW. The arms were akimbo, with the hands resting on the pelvis. The legs were extended, the left crossing the right at the ankles. Resting against the left shoulder was a deposit of objects consisting of two flints and fragments of a steel, two circular mirrors with metal backs (pl. XVI), a clay pipe of European manufacture (pl. XIV, B, d), and a pewter pipe (pl. XIII, c).

Skeleton 25, a young child, 15 in. below the surface. The body was lying E and W, with the skull toward the W. The skull was crushed and the other bones were in bad condition. Nothing was found with the burial.

Skeleton 26, a child, lying on its back, with legs extended. It was 8 in. below the surface; the head was directed SW. The bones had been disturbed and were in bad condition; the skull was crushed. Lying so that it nearly touched the lower jaw was a long shell pendant shaped like a lamprey eel (fig. 16), and below it was a shell disc (fig. 6).

Skeleton 27, a child, 14 in. below the surface. It was lying N and S, with the skull toward the S. The skull was badly crushed and the bones of the body were much decayed. Nothing was found with it.

Skeleton 28, an adolescent, lying on its back, with legs extended and with arms at the sides. It was 7 in. below the surface; the head was toward the SW. The skull was crushed, but the other bones were in their normal positions. Six inches beneath the skeleton and a little to the west of it was a layer of clam-shells under which was a hammerstone and several deer-bones.

Skeleton 29, 9 in. below the surface, was that of a child which was lying on its back. The arms rested at the sides, the legs were extended, and the left foot was crossed over the right. The body was lying with the head toward the SW. When the first indication of this skeleton was encountered, careful search was made in the earth that had been thrown out with a few finger-bones. In this



a. SKELETON 31 WITH DEPOSIT OF BONE TUBES AND PIPES



b. BONE TUBES AND PIPES, AND UPPER PART OF SKELETON 31

were two shell crescents (fig. 4), a metal spoon (pl. XVII), six catlinite beads of irregular form, a tubular shell bead, and many small glass beads, all of which evidently had been held in the right hand. Near the left knee a small metal bell (pl. XVII) was found. Not far from the pelvic arch and resting against the left femur was a deposit of ornaments consisting of a shell disc, a small metal bell (pl. XVII), and a catlinite bead with serrated edge.

Skeleton 30, a child, the skull of which lay 14 in. below the surface. It was lying extended on its back, the skull directed E, the arms at the sides and the legs extended. On the breast and almost touching the lower jaw was a bird ornament of shell (fig. 11); below and around it were many small glass beads. Under the right cheek-bone was a cylindrical shell bead. The shell bird and this bead are shown in plate VII, *a*. About the neck were the beads of a necklace, of which the shell bird no doubt was the pendant. This necklace consisted of six shell disc-beads, nine wampum beads, and a number of glass beads. The number of disc-beads is the same as that noted in connection with Skeleton 7, and the necklace evidently had been similar in form, the relative position of the pieces being shown in plate VIII, *a*. Small pieces of red paint were mingled with the beads, and under the occiput was a mass of similar material. (Pl. VII, *b*.)

Skeleton 31, an adult, lying on its right side, with legs flexed. It was 13 in. below the surface, and the head was toward the SW. On the right side of the body, near the ribs, was a clay pipe (pl. XIV, *B, b*) that evidently had been broken before being deposited with the burial, as the stem was lying below the stem of a pewter pipe, while the bowl was level with the latter. The bowl of the pewter pipe (pl. XIII, *a*) was beneath a deposit of six bird-bones which probably had been used as medicine tubes (pl. VI).

Skeleton 32, an infant, lying NE and SW, with the head toward the SW. It was 17 in. below the surface, and many of the bones were missing. There were no accompaniments.

Skeleton 33 was that of an adult which lay on its back with the arms at the sides. It was 9 in. below the surface, with the head SW. The skull, which was broken, lay in a mass of red paint and char-

coal. Near the left upper part of the skull was a fragmentary turtleshell rattle, only a portion of the carapace of which remained, but the fragments show that it had been drilled. The lower part of the shell was broken, but all the pieces were recovered and show the instrument to have been ornamented with a design formed by drilled holes as shown in plate XI and figure 18. Mingled with the fragments of the rattle were 35 small glass beads, and 26 small pebbles which no doubt had been contained in the instrument when in working condition.

Skeleton 34 was that of an adult, found 10 in. below the surface, lying on its back with the legs extended, and with the head SW. No objects were found with it.

Skeleton 35, an adult, lay 14 in. down, the skull directed SW. The bones are well preserved, but nothing was found with them.

Skeleton 36, an infant, 11 in. down, with the head toward the SW. The leg-bones were missing and the other bones were badly decomposed. Below the lower jaw and resting on the chest were eight shell pendants, six of which represent owls (fig. 9), and two shell ornaments in the form of fish, also a number of shell and glass beads.

Skeleton 37, a child, was found lying on the right side, with the legs flexed. The head was toward the SW and was 1 ft. 9 in. below the surface. The hands were clasped under the head. Resting on the upper part of the skull were 45 shell beads.

Skeleton 38, an adult, found 1 ft. 7 in. down, consisted of a mass of dissociated bones that had been reburied.

Skeleton 39, an adult, lay on its back, with the head toward the SW and 11 in. below the surface. The hands were clasped on the breast. An upturned brass kettle (pl. XIV, A) was found with the rim resting on the forehead. Near the right scapula was a clay "trade-pipe," and under it another of similar size and make (pl. XIV, B, c, f). Near the pipe were three flints such as were used for striking fire. At one side of and near the pipes were two round mirrors in metal frames (pl. XVI), and in the right hand were two flints similar to those found near the pipes. (Pl. VII, B.)

Skeleton 40 was that of an adult; it was found 1 ft. below the surface and had been previously dug. No objects accompanied the burial.



a. SKELETON 30 WITH SHELL BIRD AND TUBULAR SHELL BEAD



b. SKELETON 39 WITH BRASS KETTLE ON HEAD

Skeleton 41, an adult, lying on its left side, with legs flexed and head toward the W, was found 1 ft. 7 in. below the surface. The right hand rested against the pelvis, the left was under the skull. The left humerus and ulna were ankylosed at the elbow. Nothing was found with the body.

Skeleton 42, an adult, lay 7 in. below the surface. The skull was badly broken, and the bones of the upper part of the body had been disturbed, probably by plowing. The legs were flexed and their position showed that the body had rested on its left side. Nothing was found with it.

Skeleton 43, an adult, was represented by a mass of dissociated bones. The pelvis was 7 in. below the surface. This burial had been previously dug.

Skeleton 44 was that of an adult; it was lying on its back, with body extended; the skull was toward the SW, rested on its left side, and was 15 in. below the surface. On the right scapula was a short, round flaking-tool of antler, and under the skull was a bone awl (pl. x, B, f) and a bone flaking-tool.

Skeleton 45 was that of an adult, lying on its left side, 18 in. below the surface, with the skull toward the SW. The leg-bones, the bones of one foot, and those of the left arm were missing.

Skeleton 46, an adult, lay 2 ft. 3 in. below the surface. This burial had been previously dug.

Skeleton 47 was that of an adult, lying with its head toward the SW and 16 in. below the surface. Part of the skull was missing, and the upper part of the body had been disturbed.

Skeleton 48, an infant, was found 13 in. below the surface and with its head toward the SW. The bones were in poor condition and had been disturbed.

Skeleton 49, an infant, was in very poor condition; it was found 17 in. below the surface, with the skull toward the SW.

Skeleton 50, an adult, lay 1 ft. 10 in. below the surface, with head toward the SW. The bones are well preserved, but the burial had been disturbed.

Skeleton 51 was that of a small child and was found 1 ft. below the surface. The only remaining portion was the skull, which was

badly crushed, but slight traces of decomposed bone showed that the head had been directed SW. Near the left side was a small brass kettle (pl. XIV, A), also a number of small, red glass beads.

Skeleton 52 was that of an adult and was found 1 ft. 8 in. below the surface. The bones had been disturbed and the skull was missing.

Skeleton 53 was that of an adult; it lay 16 in. below the surface and was extended on its back. The skull, which was badly broken, lay toward the SW. On the left wrist were four brass bracelets (pl. xv) and fragments of others. The ulna and the radius had been discolored by the salts of the metal. On the left scapula were two large shell pendants, each in the form of a fish (fig. 14). Under the chin were a number of small glass beads, also a small copper bead and another of catlinite.

Skeleton 54, extended on the back, was that of an adult and was found 16 in. below the surface, with the skull toward the SW.

Skeleton 55, that of a child, was found 9 in. down. It was lying extended on its back, with the head toward the SW.

Skeleton 56, an adult, was found 8 in. below the surface, with the head toward the SW; it rested on its right side, and the legs were flexed. The hands were under the chin. The lower leg-bones were deformed.

Skeleton 57, that of an adult, was found 15 in. below the surface, with the head toward the SW; it was lying on its right side, with legs flexed and hands under the chin. On the right side, and extending from the lower jaw to the pelvis, was a pewter pipe (pl. XIII, B) the rim of which is ornamented in relief with the figure of a wolf or a dog.

Skeleton 58, a child, lay extended on the back, 1 ft. beneath the surface, with the skull toward the SW. The arms were at the sides of the body. In each hand was a mass of fused iron. In association with this burial there were evidences of a feast, for over the body there was a broad discolored area in which were much charcoal and many cracked animal bones, mostly those of deer. Other burials showed evidences of accompanying feast-pits, but none was so strongly marked as this.

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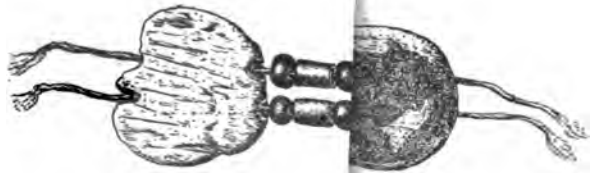
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Skeleton 59, an adult, was 1 ft. 8 in. below the surface, with the head toward the SW. The body was lying on its right side; the legs were flexed. About the neck was a metal chain (pl. xvii). Seven cylindrical shell beads, and a shell pendant in the form of a beaver (fig. 17), were found at the back of the neck.

Skeleton 60, that of an adult, was found extended on its back, 13 in. below the surface, with the head toward the SW. The left hand was on the chest; the right was at the side of the body. A broken bowl rested on the head.

Skeleton 61, an adolescent, was found 15 in. below the surface, with the head resting on the right side, directed toward the SW. The skeleton lay on its back, with the body extended and the hands under the skull. Under the left shoulder were 130 small shell beads in rows, their position suggesting that they had formed part of a woven band, the beads of which were arranged as are those in a typical wampum belt.

Skeleton 62, a child, lay 1 ft. 9 in. below the surface, with the head toward the SW. The skull was broken.

Skeleton 63 was that of an adult; it was found 18 in. below the surface, with the head directed SW. The burial rested on its left side and the legs were flexed. The bones were in very poor condition.

Skeleton 64, an adult, 12 in. below the surface, with head toward the SW. The upper part of the body had been disturbed, but the leg-bones, which were flexed, were in position. The body was interred lying on its right side.

Skeleton 65, a child, 8 in. down. The bones had been disturbed and were in bad condition.

Skeleton 66, a child, 7 in. below the surface, with head toward the SW. The body lay extended on the back. Under the chin was an elaborately carved shell gorget (fig. 7) and fragments of iron. A bear-tooth also was found with the body.

Skeleton 67, an adult, the bones of which were in poor condition, was found extended on its back only 2 in. beneath the surface, the skull directed SW. On the left shoulder were two native pottery pipes (pl. xii, a b), fragments of iron just above the pipes, and a piece

of flint. The bowl of one of the pipes, which represents a human figure, was directed toward the skull; that of the other pointed toward the feet.

Skeleton 68, an adult, was found 10 in. below the surface, lying on its right side, with legs flexed and with the head toward the SW. The hands were under the chin.

All the skeletons that it was found possible to preserve have been presented to the United States National Museum, where they are now being studied by Dr Aleš Hrdlička. In the accompanying table is presented all necessary information in regard to the physical features of the burials encountered, so far as the present paper is concerned. An exhaustive report on the skeletons, by Dr Hrdlička, will be published in the near future.

A summary of the positions of the skeletons, so far as it was determinable in each case, is as follows:

Extended	28
Flexed.....	17
Disturbed	18
Previously dug	3
Reburial.....	1
Bones decomposed	1
	68

OBJECTS ASSOCIATED WITH THE BURIALS

SHELL ORNAMENTS

DISCS

Prof. W. H. Holmes, in his "Art in Shell of the Ancient Americans,"¹ says:

I present a number of illustrations of a class of relics which have occasionally been mentioned in literature, and which are represented to some extent in our collections. As these objects resemble beads rather more closely than pendants, I shall refer to them in this place, although Mr. Schoolcraft considers them badges of honor or rank, and treats them as gorgets. He describes them as consisting of a "circular piece of flat

¹ *Second Ann. Rep. Bureau of Ethnology*, p. 228.

TABLE SHOWING THE CHARACTER AND ARRANGEMENT OF THE BURIALS, AND THE OBJECTS ACCOMPANYING THEM

SKELETON NUMBER	DEPTH	DIRECTION OF SKELETON*	POSITION OF SKELETON	POSITION OF SKULL	DIRECTION OF FACE	AGE AND SEX	OBJECTS FOUND
1	3' 3"	SW-NE	Disturbed	Back		Old person ♂	
2	10"	"	Extended	"		Child	
3	1' 0"	"	Flexed	Right	SE	Adult ♂	
4	21"		Disturbed			Child	
54	1' 4"	"	"	"		"	
55	0"	"	"	"		Child	
56	8"	"	Flexed	Right	SE	Adult	
57	1' 3"	"	"	"	SE	"	Pewter pipe with animal on bowl
58	1' 0"	"	Extended	Back		Child	Fused metal
59	1' 8"	"	Flexed	Right	SE	Adult	Beaver figure of shell; Metal chain; Cylindrical shell beads
60	1' 1"	"	Extended	Back		"	Fragment of earthenware bowl
61	1' 3"	"	"	Right	SE	Adolescent	Small shell beads
62	1' 9"	"	Disturbed	Left	NW	Child	
63	1' 6"	"	Flexed	Right	SE	Adult	
64	1' 0"	"	"	Back		"	
65	8"		Disturbed	Right		Child	
66	7"	SW-NE	Extended	"		Child	Shell gorget; Bear-tooth; Fragments of iron
67	2"	"	"	"		Adult	Two pottery pipes; Flint and steel
68	10"	"	Flexed	Right	SE	Adult	

* The first direction given indicates the position of the skull with reference to the direction of the skeleton.

† This skeleton is that of a Scandinavian.



BIRDS AND TUBULAR BEADS OF SHELL FOUND IN THE CEMETERY BY MR BURSON BELL

shell, from one and a half to two inches in diameter, quartered with double lines, having the devices of dots between them. This kind was doubly perforated in the plane of the circle."

In "Notes on the Iroquois," by the same author, we have a much fuller description. He says that "this article is generally found in the form of an exact circle, rarely a little ovate. It has been ground down and repolished, apparently, from the conch. Its diameter varies from three-fourths of an inch to two inches; thickness, two-tenths in the center, thinning out a little towards the edges. It is doubly perforated. It is figured on the face and its reverse, with two parallel latitudinal and two longitudinal lines crossing in its center, and dividing the area into four equal parts. Its circumference is marked with an inner circle, corresponding in width to the cardinal parallels. Each division of the circle thus quartered has five circles, with a central dot. The latitudinal and longitudinal bands or fillets have each four similar circles and dots, and one in its center, making thirty-seven. The number of these circles varies, however, on various specimens."

Dr William M. Beauchamp,¹ in referring to Schoolcraft's description of this class of ornaments, says:

"The form described by Schoolcraft is usually indented at the edge, where each perforation begins, and the cross lines are sometimes omitted. The small circles and dots have no meaning, the number being regulated by the space to be occupied. They were apparently made by a small circular steel drill, having a central point. . . . The parallel holes from edge to edge served to keep the necklace flat when strung, and this feature is frequent in pipestone ornaments. . . . Beverley, in his *History of Virginia*, p. 145, calls these runtees, and says "they are made of the conch shell, as the peak is, only the shape is flat and like a cheese, and drilled edgeways."

Dr Beauchamp states also that these objects were probably made by white men, and "may be the round shells used as presents in one New York Council." With this we cannot agree, for the irregular shape of the discs found in the Minisink cemetery, in connection with the irregular ornamentation, points to aboriginal workmanship. Dr Beauchamp further states that Professor Holmes is correct in his assumption that these ornaments were

¹ Wampum and Shell Articles Used by the New York Indians, *Bulletin of the New York State Museum*, No. 41, Albany, 1901, p. 373.

beads rather than pendants, and adds that "several strings of these have been found just as they were deposited with the dead."

With two of the skeletons (7 and 30) in the cemetery, neck ornaments composed in part of these discs were found in position. With Skeleton 7 were six disc-beads, and with them twenty-one small black glass beads, two cylindrical metal beads, and one white shell bead of oval form. The glass beads were found between the discs, there being in one instance four of these and two of the metal beads in place and still adhering to the original cord. Their position showed conclusively the interval between the disc-beads, and the number of small shell beads used in alternation. Twenty-one of the glass beads were found. As twenty is the number of these required to complete the necklace, the remaining bead may have been used in connection with the white glass bead to form a pendant, or there may have been another six-bead spacing at the end of the string, which would have preserved the proper alternation of discs and beads when the necklace was in use.

The manner of wearing the disc-beads has been discussed by various authors. It is generally believed that they were used as necklaces, but the manner of stringing them differed. The finding of the necklace with Skeleton 7 enables us to determine the actual method of stringing these discoids when used in connection with smaller beads. Plate VIII, *b*, illustrates the necklace in its original form and shows the discs in actual size. The drilling is indicated, and on the edges where the perforations begin there are indentations, one at the mouth of each opening (probably due to abrasion by the small glass beads with which they were strung), giving the intervening space the appearance of a projection. The discs are thick in the center and taper toward the edge. They had been ornamented by incising, but the surfaces have disintegrated to such an extent that only traces of the decoration remain.

Six shell discs of similar size and form were found about the neck of Skeleton 30 (pl. VIII, *a*). Four of them are decorated on both faces with transverse bands crossing at the center; the other two show only slight traces of such lines. The disc shown in figure 3 is the most perfectly preserved. Both sides bear the same



A. ANTLER ARROWPOINTS AND PIECES OF WORKED ANTLER



B. TYPICAL BONE AWLS FOUND IN THE MOUND

decoration. The central square formed by the crossing of the incised bands is plain, while in each of the diverging bands there are four dots. The drilling of these discs is of the same character as that shown in the series found with Skeleton 7, but the surfaces of three of the discs with Skeleton 30 (the first, second, and fifth from the left) do not taper from the center toward the edge, while the other three taper only slightly. Intermingled with these disc-

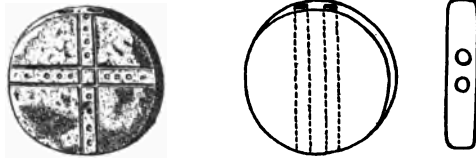


FIG. 3.—Shell disc found with Skeleton 30.

beads and occupying the spaces between them were 144 small glass trade-beads, nine ordinary white and purple wampum beads, and a cylindrical glass bead similar in size and color to the wampum. The small glass beads no doubt filled the intervals between the disc-beads, as did the glass beads forming part of the necklace with Skeleton 7. The wampum

and the cylindrical glass bead may have formed the strand from which the bird pendant found on the breast of the skeleton was suspended. It may be seen in position in the photograph of this skeleton (pl. VII, *a*), and near it, in the shadow of the upper jaw, a badly weathered portion of a large tubular bead. The size and general form of the bird pendant is shown in figure 11. It was drilled through the neck for suspension. From

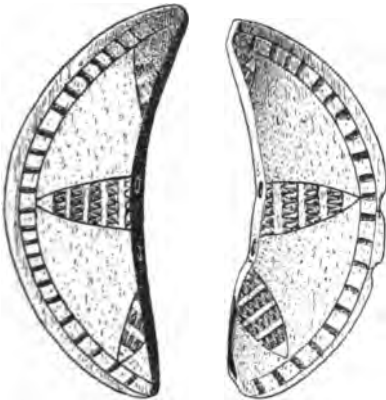


FIG. 4.—Crescent-shaped ornaments of shell found with Skeleton 29.

evidence afforded by more perfect specimens of similar form it is probable that the upper surface was ornamented, but decomposition of the shell has obliterated all traces of decoration.

Near the pelvis of Skeleton 29 was a shell disc-bead, identical in drilling and in uniformity of thickness with the beads found with

Skeleton 7. Near the right hand a deposit of shell and glass beads was found, also a few beads of catlinite. With this deposit were two crescent-shaped beads or pendants (fig. 4), alike in size and ornamentation, and both drilled for suspension. Here the drilling takes the form of the double perforation noted in connection with the disc-beads. The outer edge of each pendant, which forms the segment of a circle, is carefully finished, but the concave edge is irregular and crudely worked. Examination of these specimens suggested that they might have formed parts of a large gorget. The spacing of the radiating ornaments supported this belief, which was strengthened by the occurrence of the section of part of

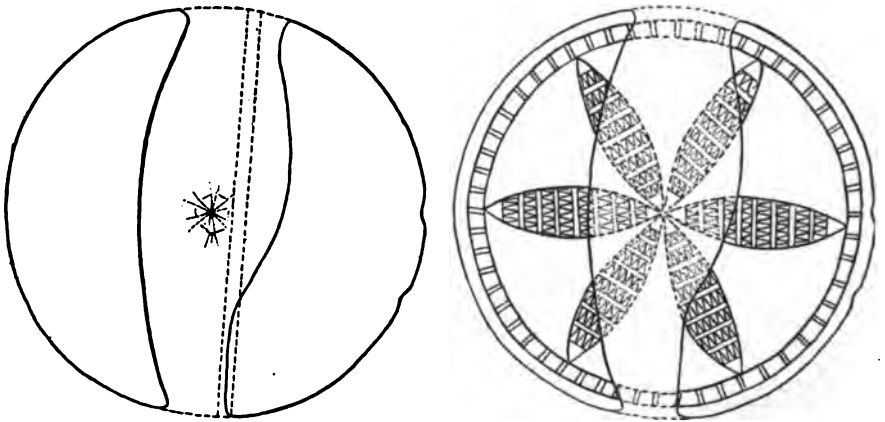
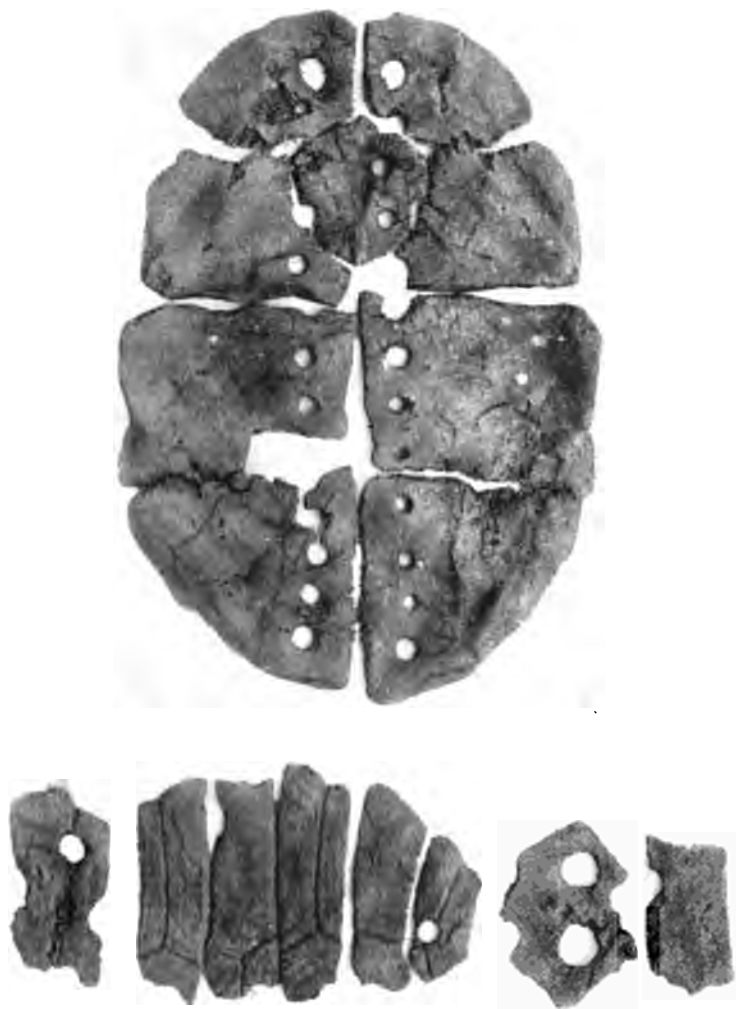


FIG. 5.—Gorget restored from crescents (fig. 4) found with Skeleton 29.

an old lateral drilling, and finally confirmed by assembling the two reworked fragments and restoring the design of the original gorget as shown in figure 5. This design is similar to that on a specimen from Pompey, New York, figured by Beauchamp, and practically duplicates the central design of the shell gorget shown in our figure 7. In figure 5 an outline of the original disc is shown, with the line of the old drilling indicated by dotted lines. From the position of this drilling, which was to one side of the center, it is probable that the disc had been doubly perforated. The crescents are practically uniform in thickness. The edges are slightly rounded from wear.

With Skeleton 26 another shell disc was found. As shown in



FRAGMENTARY TURTLESHELL RATTLE FOUND WITH SKELETON 33

figure 6 it is similar to the ones that accompanied Skeleton 7, being of the type that decreases in thickness from the center to the edge. The ornamentation is practically identical with that on the discs found with Skeleton 30, the only difference being the presence of a dot in the central square. The disc is drilled, but there is only one perforation, whereas all the others are doubly pierced. This disc was found under the lower jaw of the skeleton,

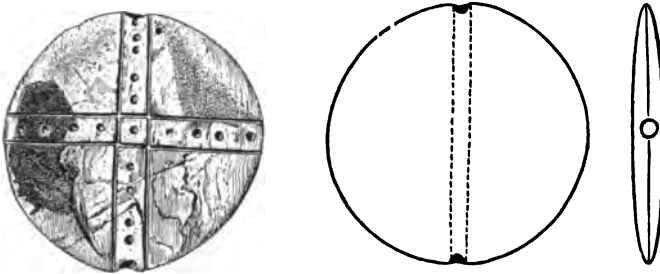


FIG. 6.—Shell disc found with Skeleton 26.

and near it was a shell ornament in the form of a fish. As no small beads were found in association, it is probable that these ornaments were used as pendants.

GORGET

The largest and most ornate of shell ornaments of the disc type found with the burials is a gorget which accompanied Skeleton 66 (fig. 7). It evidently was made from a portion of the outer wall of a conch. The design is deeply incised. The holes for suspension are drilled through the central portion, which bears an ornamentation similar to that shown in figure 5, which illustrates the restored gorget found with Skeleton 29. There are six divisions in this design, and the same number is shown in the heart-shaped figures that form the major portion of the ornamentation. As the reproduction of this object is of natural size, a detailed description of the design is unnecessary. It is, however, an unusually good specimen of a type of shell ornaments seldom found in eastern burial sites.

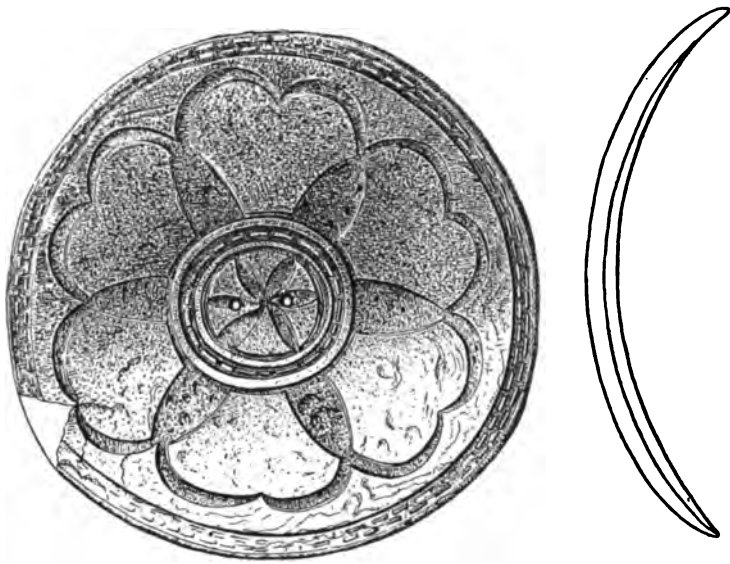


FIG. 7.—Shell gorget found with Skeleton 66.

TRIANGULAR PENDANTS

With the skeletons four triangular shell pendants were found. The largest of these (fig. 8, *a*) was under the skull of Skeleton 8. It is very thin and the surface is much disintegrated. A hole has been drilled through the upper part, but only a portion of it remains.

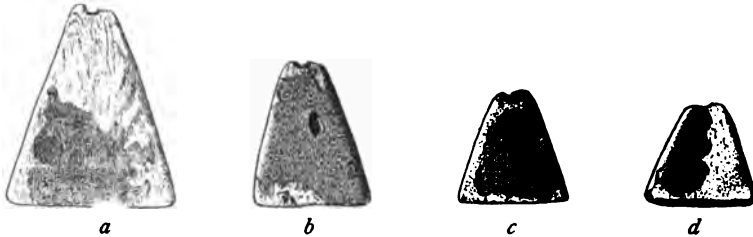


FIG. 8.—Triangular shell pendants found with Skeletons 8 and 10.

The other three triangular pendants were found under the lower jaw of Skeleton 10. In form they are similar to that first described, but the perforation for suspension is drilled through the longer axis, as shown in figure 8, *b-d*.

There is no evidence of ornamentation on any of these pendants.



POTTERY PIPES OF NATIVE WORKMANSHIP

a, b, Found with Skeleton 67. *c*, Found in Western Part of the Cemetery

BIRD FIGURES

Shell ornaments in the shape of birds are represented by ten specimens, all of which are in the form of pendants and were found with burials. Eight were taken out in the course of our work, while the other two, as previously mentioned, were found by Mr Bell. Of the ten examples six portray the body of a bird as it appears with wings folded; the other four represent the wings extended, and in each specimen the other main physical features are likewise indicated.

Figure 9 shows one of a series of six bird-shaped pendants of shell, similar in general form, found near the neck of Skeleton 36. They vary somewhat in shape and size. These shell effigies represent the owl; two of them show the eyes and the beak. There is no evidence of decoration on the body portions. The hole for the suspension of the pendants passes through the neck, and it is evident that the objects had been worn a long time, as the ends of the beads with which they were strung have abraded the sides of all of them. With these six bird pendants were 237 shell beads, and two shell pendants in the form of fish.

The bird shown in figure 10, which is rather massive and has extended wings, was found in association with small shell and glass



FIG. 9.—Shell owl figure found with Skeleton 36.



FIG. 10.—Shell bird pendant found with Skeleton 18.

beads near the neck of Skeleton 18. The breast is carved in relief, as are also the legs and the beak. The wings taper from the body to the tips, and on each side of and at the junction of the wing

and the body they are decorated with parallel lines and dots. Decomposition of the surface has obliterated the greater part of the original ornamentation, the design mentioned being the only decoration that remains. A broad, lateral groove accentuates the neck, and the perforation for the cord passes directly beneath it. The eyes are represented by small circles, each with a central dot.

The size and general form of another bird pendant are shown in figure 11; it was found with Skeleton 30 and probably had been



FIG. 11.—Shell bird pendant found with Skeleton 30.

attached to the necklace of shell discs and beads lying nearby. This bird is more delicately carved than the one just described. It has an oval body and scimitar-shaped wings which taper from the body outward. The raised portion forming the beak and the slight indication of the eyes are the only decorative features that remain, the surface being soft and chalky from decomposition.

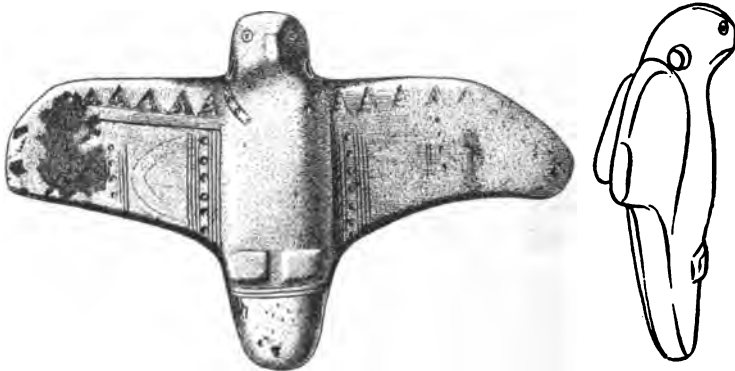


FIG. 12.—Shell bird pendant found by Mr Bell.

One of the bird figures found with the skeleton of a child by Mr Bell (pl. IX, *b*, and fig. 12) presents a surface the major portion of



PEWTER PIPES FOUND WITH THE BODIES
a, Skeleton 31. *b*, Skeleton 57. *c*, Skeleton 24

which is perfectly preserved. The figure represents a hawk or an owl. The tips of the wings and the end of the tail are discolored, and their superficial polish is gone; the tip of the beak is abraded, and a small piece has been broken from the left wing; otherwise the figure is perfect. The shell from which this bird was cut was slightly curved, the concave portion being the side that rested against the body of the wearer. The body of the figure is a rounded oval; the legs are represented by two knobs; the head is carved in the round, and the eyes are formed by circles enclosing dots. The hole for suspension passes through the neck. At the lower part of this aperture, on each side, is the end of a necklace-like band formed by parallel lines separated by a row of dots in contact. The claws of the left foot are faintly represented by a series of five dots, and there is a slight groove in a corresponding position on the right foot, but these indications are not shown in the drawing. Three deeply incised lines separate the tail from the body, and there are four incised parallel lines on each side of the tail. The upper edge of the wings is outlined by a series of triangular incisions, five on each wing, forming a serrate design. Paralleling the base of this ornamentation is a narrow line which serves as a starting point for a series of three incised bands that decorate each wing. The band nearest the body on each side is clear-cut and well preserved; it is formed by two groups of four parallel, vertical lines separated by a row of dots. This design is similar to that shown in figure 10 which illustrates a bird found with Skeleton 18.

The second bird (pl. IX, *a*, and fig. 13) suggests the figure of a kite or possibly a swallow. In the former specimen the breast of the bird was shown, whereas this one represents the back. It has broad, scimitar-like wings and a bifurcated tail. The surface is decomposed to such an extent that the physical features have almost disappeared, and only portions of the ornamentation remain. The back is formed by a raised oval area at the point where the tail and body join; the head is irregular in form, the top being rounded and projecting slightly above the level of the neck. The attitude of the figure shows that the bird is represented in flight. The hole for suspension passes through the central portion of the head.

Just above and slightly in front of the perforation openings are the eyes, represented by the usual circle surrounding a dot. The beak was below the eye-circles, but it is missing; the general contour, however, shows that it projected only slightly above the present surface. A decorative band begins below the openings of the perforation and extends across the rear of the neck; it is composed of two parallel lines separated by a row of dots, thus practically duplicating the design on the breast of the bird figure last described,

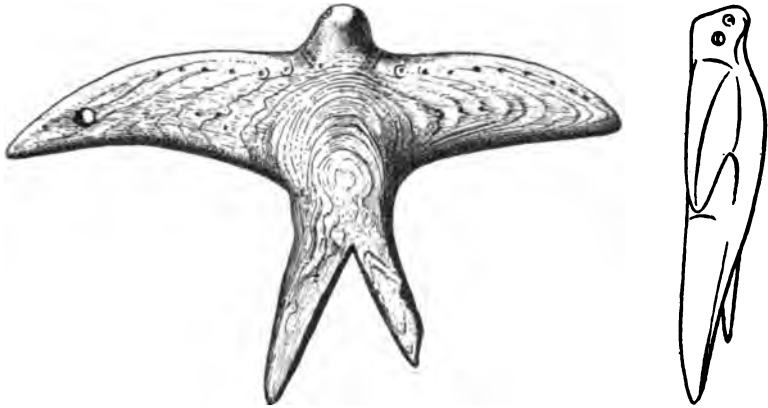


FIG. 13.—Shell bird pendant found by Mr Bell.

except that in the present specimen the dots are not in contact with the lines. Extending along the upper edge of the wings is a line of dots enclosed in small circles, and there are faint indications of another line near the central part of the wings. There is a drilled perforation near the tip of the left wing, as if to facilitate the attachment of a feather or some other symbolic object.

FISH FIGURES

Shell ornaments in the shape of fish are not uncommon in Algonquian and Iroquois burial sites. In some sections of the East they are usually crudely fashioned, but those found in the Minisink mound are uniformly well executed.

All the shell ornaments of this type from the mound were found with skeletons. There are six specimens, five representing a porpoise-like creature and the sixth a lamprey eel.



A. BRASS KETTLES FOUND WITH SKELETONS 39 AND 51



B. EUROPEAN CLAY PIPES FOUND WITH THE BODIES

The largest ornaments of this class were found with Skeleton 53; they were resting on the left scapula and had probably been the pendants of a necklace, as shell and glass beads were found near the neck of the skeleton. The best preserved specimen is shown in natural size in figure 14. The shovel-shaped nose, curved back, and the large dorsal fin give it somewhat the appearance of a porpoise or a dolphin. The tail and the dorsal, ventral, and anal fins are carved in relief. The eye is represented by a dot within a circle, and in addition to a well-defined decorative band there are traces of two other bands on the eroded portion of the shell. The figure has two holes for the passage of a suspending cord, one on each side of the dorsal fin, the lower openings being midway between the ventral and the anal fin.

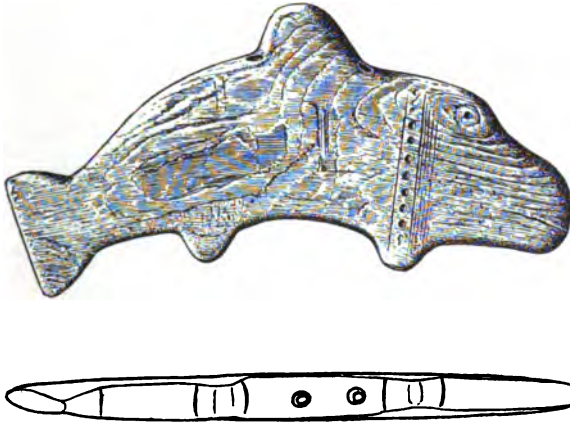


FIG. 14.—Shell pendant of fish form found with Skeleton 53.

The fish figure found with the one just described is practically a duplicate in size and form; but there are minor differences, such as the spacing of the fins and the drilling. The position of the suspension holes is the same, but on the lower surface the openings are nearer together than in the first specimen. None of the three decorative bands is well preserved, but the one near the central portion of the body, and the third, extending from the upper portion of the ventral fin to the back, are more clearly defined than the remaining one.

Another fish figure of shell (fig. 15) was found with Skeleton 10; it was lying on the neck, and with it were three triangular shell pendants and a number of glass beads. This specimen is much smaller than those found with Skeleton 53, but is of the same general form; however, it is less curved, and there is a greater relative distance between the lower fins. The drilling is the same as in the other examples, the openings being on each side of the dorsal fin. The eye is represented by a deep crescentic incision, and the mouth line also is incised.

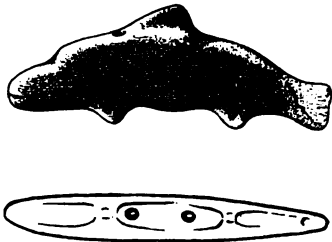


FIG. 15.—Shell pendant of fish form found with Skeleton 10.

Two very small fish carvings were found with Skeleton 36, associated with other shell pendants in the form of birds, as well as with shell beads, and were on and just below the neck of the burial. In form they are similar to the large fish figures found with Skeleton 53, and the drilling is identical, but proportionately the head is larger and the tail more slender and tapering. The surfaces of the objects are disintegrated and no trace of ornamentation remains. On one of them the dot representing the eye is still in evidence.

An unusual fish pendant was found with Skeleton 26. Figure 16 gives a top and a side view of the specimen, which probably was designed to represent a lamprey eel. The outline sketch shows the hole for suspension, also a series of lines which may be the remains of decorative bands.

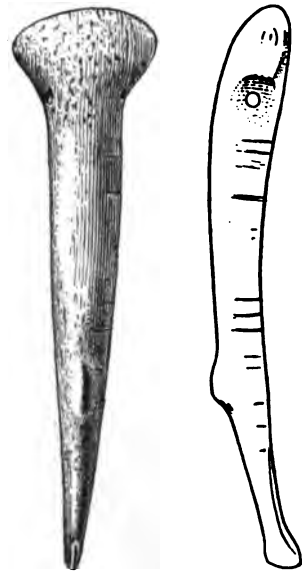


FIG. 16.—Shell figure of a lamprey eel found with Skeleton 26.

OTHER ANIMAL FORMS

A single animal figure in shell was found; it was with Skeleton 59 and represents a beaver. Figure 17 shows it in natural size, with



BRASS BRACELETS FOUND IN THE GRAVES

the missing portions indicated in outline. The body portion is very thin, but increases in thickness from the forelegs to the top of the head, as shown in the outline drawing. The under-body surface is flat, but the lower part of the head is rounded. The object is drilled for suspension, the hole passing through the neck. The upper part of the head is rounded and the eyes are represented by dots. The legs, tail, and distended sides of the body are cut in relief. Two parallel lines crossing the neck enclose three dots; this necklace-like decoration is similar to the bands that ornament the two bird figures found by Mr Bell.

BEADS

The shell beads found with the skeletons, all of aboriginal manufacture, are of five kinds, namely: typical wampum beads; long, cylindrical beads; those made of olivella shells; those spherical in form; and large disc-beads.

The disc-beads were found with Skeletons 7, 26, 29, and 30, and already have been described.

Wampum beads of the usual type were found with four of the skeletons. About the neck of Skeleton 30 were nine beads of this kind; resting on the chest of Skeleton 36 were 237, and on the cranium of Skeleton 37 there were 45. There were 130 with Skeleton 61, and, as mentioned in connection with the description of that skeleton (page 29), were lying in rows under the left shoulder, as if they had formed a belt-like object.

Cylindrical or tubular shell beads were found in six of the graves. These are of the form so readily cut from the columella of a univalve, and range in length from 1 to $4\frac{5}{8}$ in. None of them is ornamented, and in most cases the surface has disintegrated. With Skeleton 8 were five beads of this variety, associated with small glass beads in such manner as probably to have formed a necklace

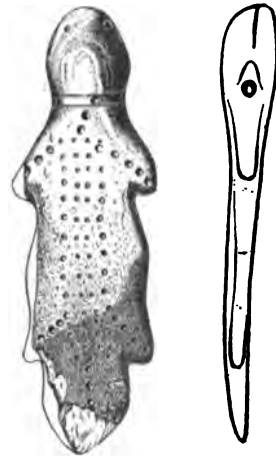


FIG. 17.—Shell pendant representing a beaver, found with Skeleton 59.

(pl. v). Under the jaw of Skeleton 17 there were nine more of this type, found in connection with a spherical shell bead and a number of glass beads. About the neck of Skeleton 18 were nine cylindrical beads and a number of glass ones. Forming part of a deposit of ornaments near the right hand of Skeleton 29 was a single bead of this type, and under the right cheek-bone of Skeleton 30 there was another, shown in plate VII, *a*. Skeleton 59 was accompanied with seven of these beads, lying near the neck.

A single spherical shell bead was found; it was lying with the tubular beads under the jaw of Skeleton 17.

With Skeleton 6 were two small beads made from olivella shells, but they are greatly disintegrated. Although this type of beads is abundant in many eastern sites, these were the only ones found in connection with the burials at Minisink.

Further reference to shells and shell ornaments not in association with burials is given on page 73.

STONE IMPLEMENTS AND ORNAMENTS

Although many stone implements and a few stone ornaments were found in the feast-pits associated with the burials and elsewhere in the cemetery, few objects of stone were buried with the bodies.

No large implements were found, and the only small ones consist of ten pieces of flint, associated with Skeletons 24 and 67. Of these, three were accompanied with steel and were probably used for striking fire. Under the chin of Skeleton 6 were two small chipped pieces of black flint, and five small pieces were associated with other material near the bones of Skeleton 39. Three flat pieces of limestone were found—one, near the skull of Skeleton 6, is a fragment with disintegrated surface, the edges of which may have been worked. A similar piece rested on the chest of Skeleton 14, and another was found under the lower jaw of Skeleton 16. From the position of these stones it is evident that they had not been deposited fortuitously.

With Skeleton 33 were twenty-six small pebbles, associated with glass beads found in and about fragments of a rattle made from the



MIRRORS WITH METAL FRAMES

shell of a box-turtle. The stones had probably been used with the rattle, and the beads as ornaments.

Another evidence of the ceremonial use of stones in connection with the burials was the finding of a rock-crystal in the mouth of Skeleton 20. Owing to their attractive appearance, both in their translucency and in the beauty of their facets, and no doubt also to the mystery associated with their formation, crystals have been and still are used by many primitive peoples for ceremonial purposes, and the Munsee of Minisink were no exception, although the skeleton under consideration is that of a white man.

Practically all the beads of aboriginal manufacture deposited with the dead are of shell; a few are made of metal, but only seven stone beads were found: these are of catlinite, or red pipestone, and were found with Skeletons 29 and 53. With the former there were six, five of which were with a deposit in or near the right hand; three of them are bar-shaped, while the others are irregular in form. The sixth bead, found with a deposit of objects near the pelvis, is also of the bar type, but the edges, instead of being plain as are those of the other beads found with the skeleton, are serrated. Catlinite was used in the Middle West in prehistoric times, and through intertribal barter found its way into regions far from the aboriginal quarries in Pipestone county, Minnesota. On this subject Dr William M. Beauchamp¹ says:

A little before A.D. 1700, catlinite, or red pipestone, was brought East in small quantities, and soon became quite abundant. It assumed many forms, and was commonly delicately perforated for suspension, often having a double parallel perforation for the purpose of keeping it exactly in place.

The beads above mentioned are the only objects of catlinite found during our investigations, but among the surface finds from the immediate neighborhood there is a pipe of this material.

For reference to objects of stone not associated with burials, see pages 70-73.

¹ *Polished Stone Articles Used by the New York Aborigines*, Albany, 1897. pp. 26-27.

OBJECTS OF BONE, ANTLER, AND TURTLESHELL

Articles made of materials under this caption found with the skeletons were limited to a bone awl, a bone bodkin, an antler flaking-tool, a fragment of a turtleshell rattle, part of a turtleshell drinking-cup, two bear-teeth, and six bone tubes.

The awl, of turkey-bone (pl. x, B, f), was found with Skeleton 44. The end has been pointed, but the remainder is unworked. The flaking-tool, found with the same skeleton, is fashioned from a

fragment of animal bone, probably deer, and one surface of the pointed end has been abraded. As the extreme point is missing, it is impossible to say definitely whether this implement was used as a flaker or a bodkin, but the worked surface would suggest the former.

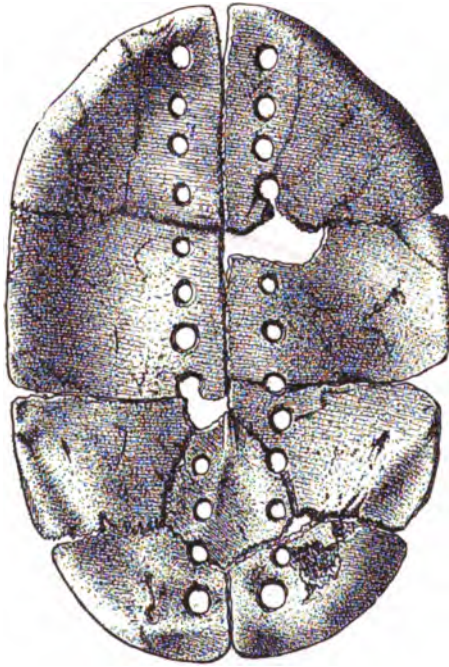


FIG. 18.—Fragment of turtleshell rattle found with Skeleton 33.

The fragments of the turtleshell rattle shown in plate xi and figure 18 was found with Skeleton 33. The carapace of the turtle is an effectual and convenient rattle-box, and together with the native gourd was no doubt among the first forms of hand rattles. The lower part of

the shell, or plastron, is almost perfect; it shows two parallel rows of holes drilled either for decoration or for the attachment of beads or other ornaments.

The fragment of the drinking-cup, above referred to, is probably a portion of the carapace of a land tortoise. Vessels of this nature



OBJECTS OF METAL FOUND IN THE MOUND

are found occasionally with burials in the eastern part of the United States, and a few unbroken ones are in museum collections. The specimen under consideration was found under Skeleton 8. The careful rounding and smoothing of the rim characterize the type of vessel of which this fragment was a part.

Canines of a bear were found with Skeletons 13 and 66. Such teeth were commonly used as ornaments, but neither of the two found with this burial is drilled for suspension or otherwise artificially worked.

The six bone tubes were found with a pewter pipe and a clay pipe, both of European make, in association with Skeleton 31. These tubes are slender bird-bones, averaging 5 in. in length. The distal and proximal portions of each have been removed and the ends carefully rounded. The surface of each specimen is smooth, but there is no evidence of ornamentation. From the size and shape of the bones it would be safe to assume that they had been used as sucking or drinking tubes. If the former, they possibly formed part of the paraphernalia of a medicine-man.

The only object of antler found with the burials is a flaking-tool which accompanied Skeleton 44. It is a short, compact, cylindrical piece of antler ($2\frac{3}{4}$ in. long, $\frac{1}{2}$ in. in diameter), and shows the effect of considerable use. It is of the type of implements used in connection with a hammer for removing the large flakes during the initial stage of chipping which followed the general roughing out of a prospective stone tool.

Reference to objects of bone and antler found dissociated from burials is given on pages 73-74.

ABORIGINAL PIPES

Only two pipes of native workmanship, both of earthenware, were found with the skeletons. This is the only noteworthy instance at Minisink in which alien objects greatly outnumbered the aboriginal artifacts. Both pipes were found with Skeleton 67, and neither is of unusual form.

As shown in plate XII, the upper specimen (*a*) exhibits a type of pipe that has been found in Iroquois sites. The major part of

the stem remains; the upper surface and the sides are flat, the under surface is rounded. The bowl is of the form of a human figure in a semi-reclining posture, the arms resting at the sides and the legs bent downward. In its present condition the pipe measures 4 in. in length.

The second pipe (pl. XII, *b*), 5 in. in length, is of the tubular variety. The stem is slender and is tubular in form. It is not decorated, but there is a line of impressed marks at the junction of the bowl and the stem. The bowl is devoid of the usual rim projection or ornament, and is without ornamentation save for a faint incised-line design on the outer surface just below the rim. The pipe is perfect with the exception that a small portion of the mouthpiece is missing.

For pipes found not in association with burials, see pages 74-75.

POTTERY VESSELS

Although makers of pottery, from the evidence offered by their burial place it would seem that the Munsee of Minisink did not use their earthenware as burial accompaniments. Of the sixty-eight skeletons exhumed, only one had pottery in association, and this was merely a fragment. The exception noted was Skeleton 60, which had on the cranium a portion of a bowl with a boat-shaped end. The exterior is paddle-marked, but there is no other evidence of decoration. Though but a fragment, it is the only evidence of a bowl-shaped vessel found in the mound.

With Skeleton 11 two large fragments of a jar were found, but as this skeleton had been disturbed it is probable that these sherds, like a large rim fragment found with Skeleton 8, had formed part of the refuse from a feast that had been cast into the grave.

A description of the technique of the earthenware of the Minisink site is given on pages 60-67, in connection with the discussion of the objects not associated with burials.

PIGMENTS

The only evidence of pigments found with burials was in association with Skeletons 8, 30, and 33. With the first of these, small



a



b

FRAGMENTARY ALGONQUIAN JARS

pieces of red ochre were mixed with the sand that surrounded the skull, the upper part of which was discolored by it. The crania of Skeletons 30 and 33 were each resting in a mass of red ochre, and small pieces of this material were mingled with the beads that encircled the neck of Skeleton 30.

Some of the crania and other bones were discolored by copper salts, but there was no indication of the use of paint as a means of decoration.

OBJECTS OF EUROPEAN ORIGIN

Although the first settlement of the Minisink region by white people was made during the last decade of the seventeenth century, the Munsee, living so near the coast, had been in touch with civilization from the earliest colonial times, hence it was not surprising to find various articles of foreign manufacture in the graves. Glass beads were among the first trinkets to be traded with the Indians, and many of these found their way to Minisink. In addition, there were found with the burials the following: brass kettles, bracelets, bells, a spoon, and beads; wire ornaments probably also of brass; a spoon of German silver; a copper chain; mirrors; fire-steels; pewter and clay pipes, and textile fabrics.

TRADE BEADS

The trade beads found with the bodies are all of glass, most of them black, white, or red, and such as were generally used in decorating wearing apparel as well as for necklaces. A few of these beads are spherical, and one, found with Skeleton 30, is cylindrical in form and blue-black in color. This last was found with wampum beads, and in size and shape is similar to those of native make.

Glass beads, unless of unusual type, have little value except from a historical point of view. With twelve of the sixty-eight burials glass beads were found: these were associated with Skeletons 6, 7, 8, 10, 17, 18, 29, 30, 33, 36, 51, and 53. The only beads of this kind worthy of special note were with Skeleton 17: these number eighteen and are of the form of kernels of corn. The skele-

ton with which they were found was that of a child, and these beads, with others of glass and shell, were about the neck. In making these beads both the shape and the color of the corn were imitated. Glass beads of similar character are found occasionally in association with burials in the eastern part of the United States. In the Museum of the American Indian is a series found with a burial in an Iroquois site in western New York.

PEWTER PIPES

Buried with Skeletons 24, 31, and 57 were three pipes made of pewter. These were probably of European manufacture, yet it is possible that they were fashioned by the Indians. Beauchamp,¹ in writing of metallic pipes, says:

Roger Williams' statement has been given regarding the quickness with which the New England Indians learned to cast metals, even in the form of pipes. Though Hudson said he saw copper pipes in New York in 1609, none of these are known, nor are metallic pipes common. Those found on Indian sites were probably made by white men. Pewter and lead were easily melted, not so iron and brass. So bars of lead were often given to the Indians at treaties and are sometimes found on their village sites.

Comparatively little is known concerning early pewter and lead pipes among the Indians, but a sufficient number have been found to show that they were not uncommon. Beauchamp describes seven that had come under his observation to the year 1902, since which time many others undoubtedly have been found. Most of the known examples of pewter pipes are simple in form. Of the three found with the burials at Minisink, two are plain, but the third is unusually ornate.

The first pewter pipe unearthed was with Skeleton 24. As previously mentioned (page 24); it was found, with other objects, near the left shoulder, and had been broken at the point where the bowl and the stem meet. In general form this pipe (pl. XIII, c) is similar to certain early trade pipes made of clay. The bowl is irregular in form and is greatly corroded. The stem is slender and

¹ *Metallic Implements of the New York Indians*, Albany, 1902, p. 56.



FRAGMENTARY ALGONQUIAN JAR

slightly tapering, and there is no evidence of a heel at the outer base of the bowl. On the upper part of the bowl there are traces of an incised decoration, but its character cannot be determined. The length of the pipe is $4\frac{3}{4}$ in.

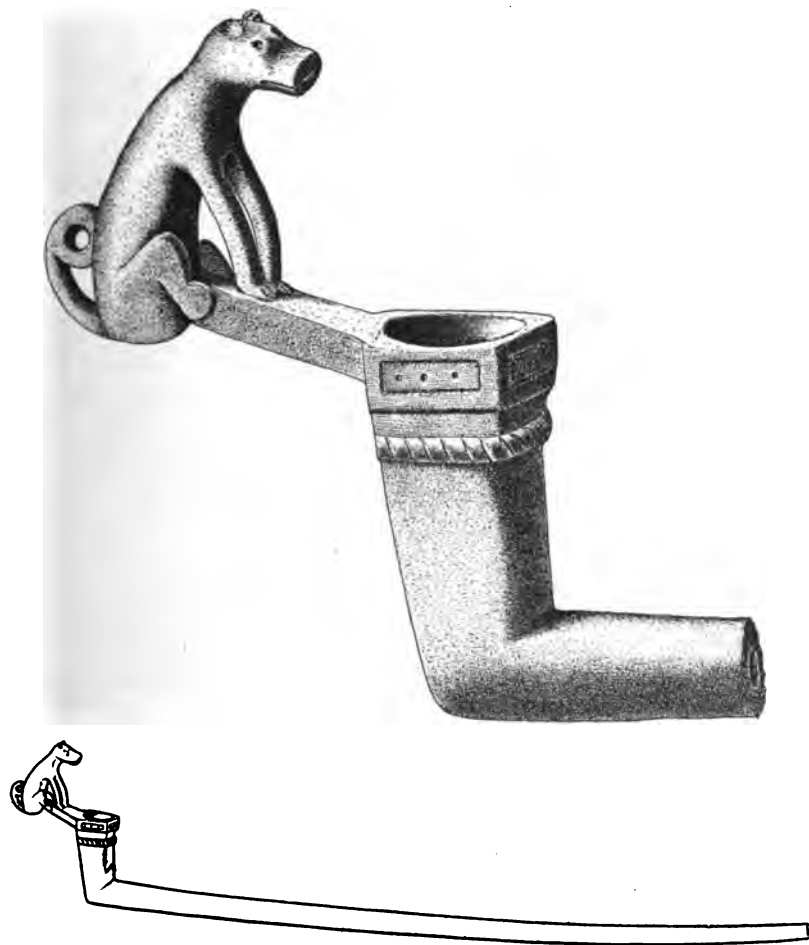


FIG. 19.—Pewter pipe found with Skeleton 57.

With Skeleton 31 a pipe of similar form was found (pl. XIII, *a*). It had been broken, and in the illustration (pl. VI) the stem only is shown. Like the pipe last described, its stem is slightly tapering.

but is thicker and exhibits less grace in treatment. The mouth of the bowl is oval, and the sides are rounded except the surface facing the smoker, which is flattened. At the base of the bowl there is a well-defined heel, but there is no property mark and no trace of decoration. The length is $4\frac{3}{4}$ in.

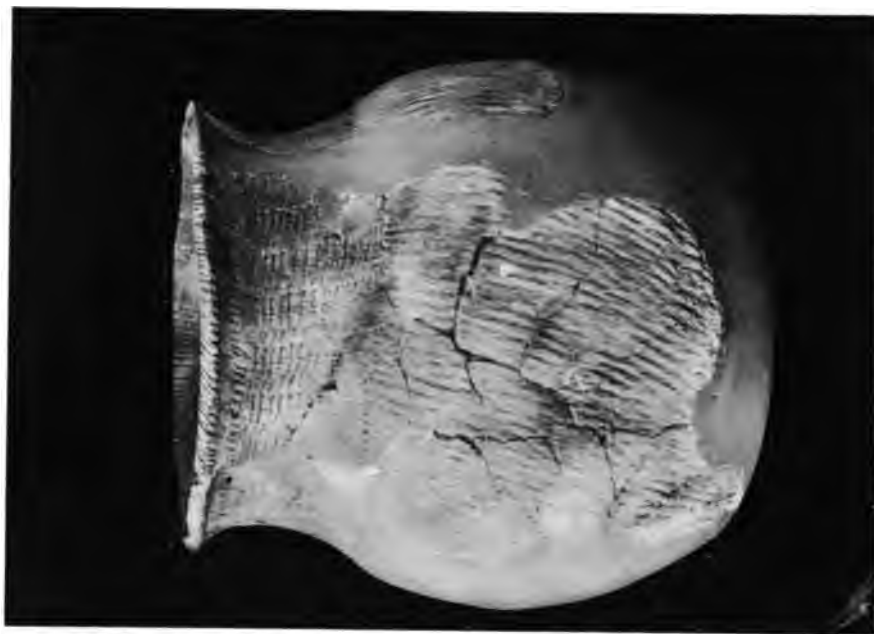
The most elaborate of the three pewter pipes was found with Skeleton 57 (pl. XIII, b). It has a long, slender, tapering, undecorated stem, and a highly ornamental bowl. The extreme length of the pipe is 18 in. (fig. 19). The stem was broken when the pipe was found, but, unlike the other two, the break occurred near the mouth end. The bowl joins the stem almost at a right angle; there is, however, a slight distal inclination. The sides and that portion of the bowl facing the smoker are slightly bulging; the rear surface is flat. The lower part of the bowl is not decorated, and there is no heel. Encircling the mouth of the bowl on three sides is a frieze, the lower edge of which is squared. On each face of this frieze there is an incised quadrangle containing three impressed dots. Below the frieze there is a rounded fillet with equidistant oblique incisions that give it the appearance of a heavy cord. Projecting from the posterior of the bowl of the pipe, at the surface of the rim, is a platform-like projection which forms a support for an animal figure, a wolf¹ or a dog, molded in the round. It is represented in a sitting posture, the hind feet resting against the sides of the support, and the front feet on its upper surface. The back of the figurine is rounded; the tail is curled against the lower part of the back; and the eyes, ears, and mouth are well represented. Neither the animal nor its support shows evidence of having been ornamented. There is no indication of a property or a manufacturer's mark, but from the elaborateness of the pipe it was probably made by a white man, although the style of decoration and the technique of the animal are so characteristically aboriginal that it is possible that Indian suggestion, at least, is responsible for this unusually ornate object from the Minisink site.

No other pipe of this form has been seen by the writers, but a

¹ It may here be mentioned that the Munsee were known also as the "Wolf tribe of the Delawares," a fact that suggests the employment of the wolf totem as a symbolic device.



a



b

FRAGMENTARY ALGONQUIAN JARS

less elaborate though allied example is described and figured by Beauchamp in the publication (p. 57) previously quoted. He says: "Fig. 127 is a curious angular lead pipe in the State Museum, with a bold platform projection in front of the top of the bowl. This was obtained by Mr J. S. Twining in Jefferson County." The accompanying illustration shows an unembellished platform projecting from the bowl, the point of juncture being below the frieze, which in this specimen is composed of encircling lines. The type is such an unusual one that it is interesting to note the main point of similarity. Whether there is evidence of the former existence of a figure at the end of the platform, the writer does not state.

In summing up the evidence presented by these pewter pipes it would seem that the two simple forms may probably be the product of Indian handicraft, while the third example was more likely the work of a white man.

Although the surfaces of all the pewter pipes are somewhat corroded, the alloy is well preserved and is not easily broken, a fact that precludes the probability of breakage after burial. It would therefore seem that the "killing" of objects deposited with the dead, a custom often practised by aboriginal tribes, had likewise been employed in this instance, and that the "spirit" of the pipe was thus liberated to accompany its owner to the future world.

In answer to an inquiry concerning pewter pipes, Mr Arthur C. Parker, State Archeologist of New York, writes as follows:

We have at least six pewter or lead pipes similar to the one you mention and several were destroyed in the Capitol fire some years ago. All of these pipes seem to have been cast by Europeans and not a few are modelled after the conventional clay pipe, although the stem is thicker. One or two pipes that were destroyed by the fire had upon the projected lip piece the effigy of some animal, I do not remember whether bear or wolf. This platform with effigy seemed to have been cast with the pipe. In the case of the pipe which you refer to in your letter, there seems to have been some animal effigy. This specimen was destroyed in the fire. The illustration in Beauchamp is correct, if I remember rightly. All of the pewter pipes in our collection are from Iroquoian sites of the middle and late colonial periods, that is to say from 1650 to 1687 and

1687 to perhaps 1755. In later sites brass pipes have been found to the exclusion of the pewter pipes.

In the *Fourth Annual Report of the Canadian Institute*¹ a pipe is figured and thus described:

The production of a pewter pipe like the above leaves no doubt as to European influence. The animal is probably meant to represent a bear. This pipe was found near the village of Scotland in Brant county. The only other pewter pipe in our collection came from the Bay of Quinte, where it was found some feet deep in the water.

This pipe is practically identical with that found with Skeleton 57. From the drawing it would seem that it has the same proportions and the same general shape. It is about one foot long, has the same slender type of stem, the bowl is placed at the same angle, a frieze encircles the edge of the bowl, and a projection rises from its upper distal surface. Instead of a dog or a wolf, as represented on the platform of the Minisink specimen, the Canadian pipe has the figure of what seems to be a bear—in a standing position with the head toward the bowl-opening.

OTHER METAL OBJECTS

Metal objects of European origin were found with thirteen of the burials, namely, Nos. 7, 8, 24, 29, 31, 39, 51, 53, 57, 58, 59, 66, and 67.

Spun-brass kettles were buried with Skeletons 39 and 51. The one found with the former skeleton was resting on the skull; it is 8 in. in diameter at the rim, and $3\frac{1}{2}$ in. deep. This kettle is perfect, with the exception of the iron bale, which had fallen apart through corrosion. The kettle found with Skeleton 51 was near the left side; it is 4 in. in diameter at the rim and $2\frac{1}{4}$ in. deep. The bottom is broken and some pieces are missing, but the bale and attachments are intact. Its rim contains a core of iron. These specimens are shown in plate XIV, A.

Four brass bracelets, besides fragments of others, found with Skeleton 53, are probably of European manufacture. The decora-

¹ Toronto, 1891, p. 67, fig. 161.



ALGONQUIAN JAR

tion is in the form of bands of oblique lines, as shown in plate xv and figure 20. The small bracelet shown in the same plate was found in a grave by Mr. Bell.

Small glass mirrors in metal frames were found with Skeletons 24 and 39. Typical examples of these are shown in plate xvi.

Two small brass bells, half an inch in diameter, were with Skeleton 29, and with the same burial was a spoon of German silver or white metal (pl. xvii). With Skeleton 58 were pieces of fused metal; with Skeleton 59 a chain of copper (pl. xvii), and with Skeleton 66, pieces of folded sheet-metal. Accompanying Skeleton 8 was a rather elaborate wire ornament, probably of brass, only portions of which remained; it is shown, together with other objects, in plate v, and the individual wire coils are illustrated in plate xvii. Pieces



FIG. 20.—Bracelet found with Skeleton 53.

of metal found in connection with small flints were with Skeletons 24 and 67, but were corroded to such an extent that their original form could not be determined; they evidently were used, however, for striking fire. Small copper beads, no larger than the usual wampum beads, were buried with Skeletons 7 and 53. It is possible that they are of native make, but it is more likely that, together with the glass beads used with them, they were obtained by the Indians from early settlers.

The finding of the bowl of a brass spoon, not associated with a burial, is referred to in another place (page 75).

CLAY PIPES

It would be natural for one to assume that the finding of European pipes bearing the makers' marks would facilitate the explorer in his endeavor to determine the age of the burials with which they were found, but after affording proof that the burials are post-Columbian, their value in determining chronology practically ceases, for there is little definite knowledge concerning pipe-makers or the time of the introduction of the product of their manufacture.

Beauchamp,¹ in prefacing his remarks concerning clay trade-pipes, says:

Precisely when European pipes began to be used by the New York Indians, we may not be able to decide. Large white stems, carved as ornaments, appear on the Onondaga site of 1654, but this was occupied for some years longer. No Dutch pipes have been found, known as such, and it is not likely that English pipes would have been introduced inland, till the English took and retained possession of the province of New York. On some sites of the last quarter of the 17th century, such pipes have been found. As public gifts to the Indians they first appear in a council held in 1692, but some may have been given before. The older ones have the bowl rather small and barrel-shaped, and the makers' initials may appear on the projecting heel below the bowl.

Six European clay pipes (pl. XIV, B) were found with the burials, of which two were with Skeleton 6. One of these (*e*), in perfect condition, has a long, tapering stem and the usual inclining bowl. On the inner edge of the rim, above the stem, there is an impressed line. Impressed in the proximal face of the bowl are the letters R T. The second pipe (*a*) is practically a duplicate of the first; it is provided with a band below the rim and with the same letters on the face of the bowl, but part of the stem is missing. Both pipes afford indication of having been smoked.

The third pipe (*b*) was found with Skeleton 31. The bowl is almost perfect, but the stem is broken. The heel at the base of the bowl is stamped with a circle containing the letters E B, and an impressed line encircles the bowl just below the rim. This pipe shows no sign of having been used.

Another clay pipe (*d*) was found near the left shoulder of Skeleton 24. The stem had been broken while in use, and there are indentations made by the teeth of the user. It has no heel, and there is no maker's mark. There is an impressed line on the proximal edge of the rim, and the inner part of the bowl is blackened from continued use.

Two pipes (*c*, *f*) were found near the right shoulder of Skeleton 39; both have broken stems, but the bowls are perfect. Each

¹ "Earthenware of the New York Aborigines," *Bulletin of the New York State Museum*, Albany, 1898, p. 115.



a



b

FRAGMENTS OF JARS OF IROQUOIS TYPE

has an impressed encircling line below the rim, and a heel at the base of the bowl. On the heel of one (c) are the letters $\overset{p}{p}$ and on the heel of the other (f) the letters E B. Both have been used.

In considering the makers' marks, we find two pipes marked R T. McGuire,¹ in speaking of this maker's stamp, says: "Dr E. A. Barber refers to a trade pipe with the initials R. T. on its heel, which was found in an Indian grave in Chester County, Pennsylvania, probably the manufacture of one Richard Taylor, of Bath, England; and another was found in Lancaster County, Pennsylvania." The pipes under consideration have the R T on the bowl and were probably Tippet pipes. Edwin A. Barber,² in a catalogue of pipes, describes three examples marked on the bowl in a similar way. The first of these he describes as: "Old British (?) Pipe; mark R T, impressed in back of bowl, and R. Tippet raised in circle on right side. From Indian Grave, Chester Co., Pa." and "Old British (?) Pipe; same form as No. 2 (the one just described) mark R T in back of bowl. From Montgomery Co., N. Y." In this instance R Tippet on the side was evidently omitted, for in Barber's description of the third pipe he mentions both marks.

No unbroken clay trade-pipes were found except in connection with the burials. Five fragments of stems, however, which had no association with skeletons, were unearthed; these may possibly have served as beads.

TEXTILES

Although the bone and shell objects were in a fair state of preservation, no objects of wood were found, and only three examples of textile fabrics, which were found with Skeletons 39 and 53. With the former were several objects of European manufacture, including a brass kettle, clay pipes, mirrors, and brass bracelets. The bale of the kettle was of iron, which had been broken into a number of pieces through corrosion; the core of the rim is also of iron. To one of the bale fragments a piece of cloth was attached,

¹ *Pipes and Smoking Customs of the American Aborigines*, Washington, 1899, p. 449.

² Catalogue of the Collection of Tobacco Pipes Deposited by Edwin A. Barber, *The Pennsylvania Museum and School of Industrial Art*, Philadelphia, 1882.

the oxidization of the iron having preserved it. This fabric is closely woven and has the appearance of colonial homespun, which it probably is.

Skeleton 53 was that of an adult, with which four brass bracelets and fragments of others were found. Attached to two of the fragments were small pieces of cloth of two different weaves. Owing to the fineness of the warp and woof strands there is little doubt that these fabrics were derived from Europeans.

URN BURIALS

The somewhat unusual practice of covering the head of a human body with a vessel, a custom commonly known as "urn burial," was manifest in two graves in the Minisink cemetery.

Skeleton 39 lay on its back with the head resting on the occiput. The kettle, as shown in plate XIV, A, was found bottom upward, with the rim resting on the frontal bone of the skull (pl. VII, b). From its position it would seem that, with the decaying of the wrappings about the head, the kettle had gradually slipped to one side.

Skeleton 60 was lying in the same position as the one just described, and on its head rested a fragment of an earthenware bowl, 3 in. in depth. Strange to say, this was the only sherd of a bowl found with a burial.

In connection with the subject of "urn-burials" the reader is referred to the section treating of Pits Containing Jars (pages 67-70).

FEAST-PITS

In the descriptions of the burials mention is made of feast-pits and the remains of feasts as represented by animal bones (many of which had been broken, evidently for the purpose of extracting the marrow), bird bones, shells, etc. In many instances the disturbed area was merely an extension of the grave itself, showing that the refuse from the feast had been either deposited near the body or mingled with the earth with which the remains were covered.

In some instances were found so-called "pits" a short distance from the burial. In one case, for example, the edge of such a pit was three feet from the nearest edge of the grave of Skeleton 6.



a



b

(a) JAR AND (b) FRAGMENT OF A JAR OF IROQUOIS TYPE

This pit contained nine small, carefully worked net-sinkers, not grouped but scattered through the soil at an average depth of 18 in. The pit also contained animal bones, potsherds, and charcoal, and in all respects was similar to the feast-pits associated with the burials. Whether this pit had been used in connection with the ceremonies performed for the burial represented by Skeleton 6 cannot be stated. This is not an isolated case, as there were several similar pits, but their relation to nearby burials could not be determined.

Feast-pits and the remains of feasts deposited with burials are of common occurrence in connection with graves in this general region, suggesting the performance of a feast ceremony as part of the mortuary rites.

DOG BURIALS

The skeletons of two dogs were found in the cemetery. The first, unearthened at a point twelve feet southwest of Skeleton 6, was lying on its side, with the head toward the NE. A worked stone, a few potsherds, and a freshwater clam shell were found with it. About a foot west of this skeleton and in the same disturbed area were a number of large stones—one a lap-stone, another a grinding stone. This dog skeleton was not associated with a human burial, and all evidence pointed to the conclusion that it had been buried in pursuance of some ceremonial rite. Certain portions of the skeleton were missing, but from its general appearance it would seem that no part of the dog had been consumed in a feast.

The second dog skeleton was found between Skeletons 13 and 17, two feet below the surface. The bones were surrounded by pieces of charcoal and deer-bones, the latter having been cracked evidently for the purpose of extracting the marrow. Judging by the appearance of the dog bones, which were massed, and from the fact that many of them were missing, the dog had probably formed part of the food used in a feast. No implements were found with the burial. In the East, dog burials in connection with human interments are not uncommon, and they are not unknown in the West.

OBJECTS NOT ASSOCIATED WITH BURIALS

POTTERY

The preliminary investigations in connection with the Minisink burial site showed that many objects of aboriginal manufacture had been turned up by the plow, and, as before stated, fragments of human skeletons were found on the surface. It therefore is probable that some of the objects found in the general excavation of the mound had been deposited originally with the dead. A case in point is that of the finding, on the surface, of fragments of tubular shell beads associated with portions of a human skull—the beads had been broken into pieces and the bones had been bleached by the sun, but their finding showed that bodies with their accompanying ornaments and implements had been brought to the surface, and as the spot for years has been a favorite hunting ground for collectors, many specimens had been carried away.

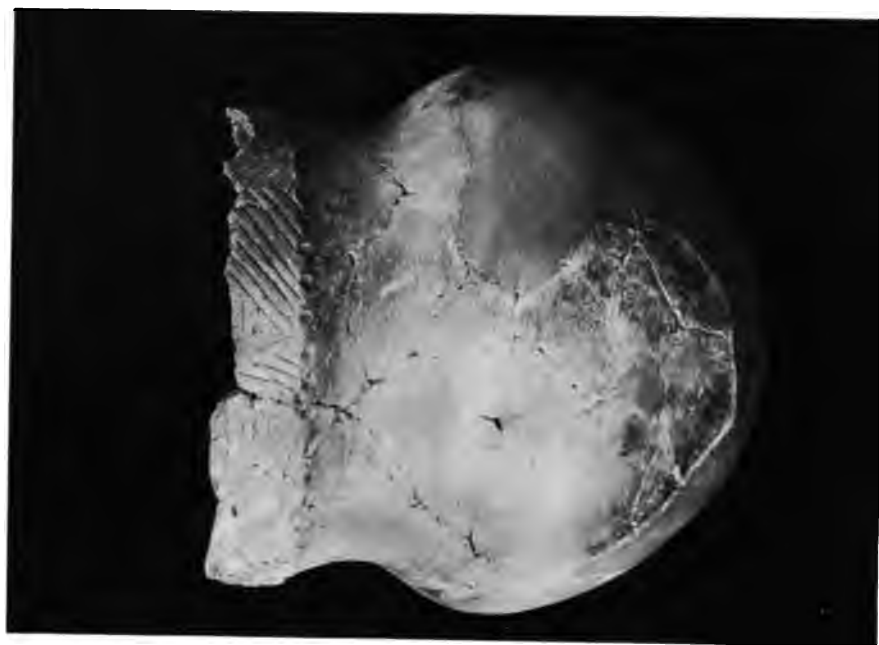
Many of the artifacts found not in direct association with burials were in groups, some of which, however, were more or less near burials, others some distance from them. Those deposits found in connection with feast-pits are treated in detail under a separate heading (pages 67-70).

At the present time a satisfactory comparative study of the ceramic arts of the area under consideration is not possible, owing largely to dearth of material. That two well-defined types of pottery are represented at the Minisink site, however, cannot be questioned. A few specimens present characters common to both types and may be the result of association of two distinct aboriginal groups of people, but we are not able to determine whether the Iroquois type of pottery represents a post-conquest period, when the arts of the victors were forced upon the conquered, or whether they were Algonquian merely by ownership through the medium of trade.

In considering the pottery of the Eastern Indians, Professor Holmes¹ says:

To exactly what extent the Algonquian tribes are responsible for the northern types of pottery, aside from those definitely assignable to the

¹ Aboriginal Pottery of the Eastern United States, *Twentieth Ann. Rep. Bur. Amer. Ethnol.*, p. 146.



a, JAR OF IROQUOIS TYPE FOUND ON SOUTHERN SHORE OF MINISINK ISLAND (PRESENTED BY MR RANDALL D. SAYRE). b, FRAGMENTARY JAR

Iroquois, may never be fully determined, but that these types are largely Algonquian may be assumed from the historic occupation of many sections by pottery-making communities of that family.

General historic and specific documentary evidence proves that the Delawares occupied the section of New Jersey under consideration for a long period, perhaps centuries. From the earliest times it was known as a Delaware stronghold, and it was held by them until the early part of the eighteenth century. The identity of the Algonquian forms is thereby assured, but with reference to the Iroquois ware only a personal opinion can be advanced. The main points of difference lie in the form and the ornamentation; the general technique presents peculiarities that are opposed to the technique of the Delawares. Cushing's comparison¹ is concise and pertinent:

The pottery of the northeastern Algonquian tribes at least is, if I may judge from examples I have seen in New England (and even from Virginia), relatively deeper, more conical, relatively narrower at the shoulders than at the rim, more decorated with cord-, net- or textile-impressed or stamped markings than with straight-lined incisions, and, above all, is more generally characterized by a shell tempering than is the inland pottery of the Iroquoian tribes.

The greater number of vessels found in the mound were in fragmentary condition. Only one perfect jar was unearthed, and this, with a similar one from the shore of Minisink island, near the mound, are the only complete examples of ceramic art obtained from this region. Owing to the fact that many of the vessels were practically complete, the missing portions have been restored, but wherever restoration has been made, the plaster has been given a neutral tint, no attempt being made to reproduce the original color of the vessel. This has enabled us to present a series of plates which afford a comprehensive idea of the various forms, embellishments, and decorative designs of the earthenware of the Minisink area.

Forty-one fragmentary vessels, representing three types of

¹ F. H. Cushing, *The Germ of Shoreland Pottery*, *Memoirs of the International Congress of Anthropology*, Chicago, 1894, p. 232.

pottery, have been restored. These types show the vessels of probable Algonquian origin, of Iroquois origin, and a few that seem to combine technique common to both types. In the accompanying plates six of the first type, seven of the second, and one of the third are shown. The remaining twenty-seven vessels, which are not illustrated herein, represent twelve of the Algonquian type, twelve of the Iroquois, and three showing a combination of the two.

The following descriptions of vessels selected for illustration present the principal features that characterize each group.

EARTHENWARE OF ALGONQUIAN TYPE

In plate XVIII, *a*, is shown a fragment of the rim of a jar of fine texture, the surface of which evinces the care and skill employed in the levigation, mixing, and manipulation of the paste, in the selection and proper addition of the tempering medium, and in the preliminary drying of the vessel and the subsequent firing. The surface was carefully smoothed and semi-polished after the addition of the final slip in preparation for the application of the design. The decorative element consists of a series of small, uniform indents or punctures, applied with a dentate wheel, each tooth of which had been delicately pointed. So skilfully was the ornamentation applied that its effect is highly esthetic. The rim is narrow and outcurving, and the lip and inner surface are covered by a continuation of the body design. This specimen is the best example of Algonquian fictile work that the mound produced.

A portion of the rim and side of a large jar is shown in plate XIX. The body is paddle-marked, resulting in a uniform mottled surface. The neck has been smoothed, but between it and the body there is no shoulder. At the point where the recurving of the neck portion begins there is an encircling band formed by two impressed lines. The neck is broad and is spanned by six angular impressed lines, arranged in pairs, extending from the encircling band to the lip of the rim.

The next specimen to be considered is half of a symmetrical jar with gently tapering sides. It is a typical example of the small,



a



b

(a) PERFECT JAR, AND (b) FRAGMENTARY JAR OF IROQUOIS TYPE

undecorated cooking vessels (pl. xx, *a*). The body is covered with textile or cord-wrapped paddle-marks, the neck has a series of wheel-marks applied horizontally, and the lip is ornamented with an impressed line evidently applied with a similar tool. Height 6 in.; diameter $4\frac{1}{4}$ in.

Another typical jar of Algonquian manufacture is shown in plate xxi. It has tapering sides and is rounded below. A portion of one side and part of the rim are missing. The body surface is covered with deeply malleated paddle-marks, which also originally covered the neck, but the latter area has been smoothed, thereby practically obliterating the ornamentation. The rim is narrow and has a deeply cut, cross-hatched design evidently made with a sharp scarifying tool. The lip of the jar is plain. Height $8\frac{1}{2}$ in.; diameter $7\frac{1}{4}$ in.

A large fragmentary jar, the rim of which is practically complete, is shown in plate xx, *b*. It is of the heavy, thick-walled type, and the body is covered with a deeply impressed ornamentation made with a cord-wrapped paddle. The neck is covered with a design made probably with a cord-wrapped rouletting implement; the base is margined with an encircling band of wheel impressions, and there is a similar band at the upper edge. The lip of this vessel is sloping and is decorated with rouletting which extends to a depth of an inch on the inner portion of the rim. Diameter of rim, $9\frac{3}{4}$ in.

Another fragment of a large vessel is represented by the upper portion of a jar, including part of the rim (pl. xviii, *b*). The body is covered with a cross-hatching of cording or other textile applied by paddling; the lines thus made are finer than any displayed by the other jars. At the depression of the shoulder and separating the body design from that of the neck is an encircling band of round punctate marks. The neck ornamentation consists of horizontal cord-markings margined on its upper part by a series of oblique cord-lines which cover the space between the main design and the outer edge of the lip. The sloping lip is ornamented with a single encircling cord-line, and the inner part of the rim is cord-rouletted. Diameter of rim, $9\frac{3}{4}$ in.

EARTHENWARE OF IROQUOIS TYPE

The Iroquois type of earthenware is characterized by a smooth body surface, devoid of paddle-marks; it is usually undecorated, and as a rule has one or more rim-projections. The clay is tempered with sand or other material, finely ground, which accounts for the fine texture as compared with the majority of Algonquian vessels with their coarse shell-tempering. Many of the Iroquois vessels are finished by means of a polishing stone or other object that imparted the required smoothness.

The following descriptions, with the accompanying plates, give an idea of the character of the vessels of this type found in the mound.

Plate XXII, *b*, shows a fragment of a typical rim of an Iroquois vessel on the lip of which is a single upward projection. The jar is of the type that has the angles of the frieze emphasized by ornaments in the form of conventional human faces; this frieze is very broad, and the angle underlying the projection referred to shows one eye and the mouth of such a face. The spaces between the angles are filled with a pattern composed of angular lines and dots, and at the point where the rim joins the neck there is an encircling series of short, deep incisions. The walls of this jar are relatively thin and the ware is light in color.

Another example of human-face ornamentation is illustrated by a fragment of the rim and side of a typical Iroquois jar with plain body as shown in plate XXIII, *b*. It has an abrupt shoulder, and the neck is concave. One lip-projection is shown, and the space below it, a portion of the frieze, is emphasized by a conventionalized human face, on each side of which is a design formed of oblique and horizontal lines, the latter bordered with punctate markings. On the projection of the lip, already referred to, directly above the face on the frieze, is a second face, similar in form and flanked with incised lines.

A typical Iroquois jar (pl. XXIV, *a*) was presented by Mr. Randall D. Sayre, of Milford, Pa., by whom it was found on the southern shore of Minisink island directly opposite the Minisink cemetery. The vessel was practically perfect when found, but while in the



FRAGMENTARY JAR SHOWING A COMBINATION OF ALGONQUIAN AND IROQUOIS TYPES

possession of its original owner it was accidentally broken. The jar is of the typical globular form; the body is symmetrical and the surface smoothly finished. A line of short, slanting incisions encircles the base of the neck. The lip-projections were large and rounded, and there was a pronounced rim depression between them. One side of the rim is missing, but there can be no doubt that it belonged to the "two-point" type. The main portion of the frieze is decorated with oblique incisions, and above this encircling band there is a series of irregular, horizontal lines. Height 7 in.; diameter $6\frac{1}{2}$ in.

Plate xxv, *a*, illustrates the only perfect jar found in the mound; it is a symmetrical vessel of the "four-point" type, and has an elaborately decorated frieze, an incurved neck, and a body that tapers gracefully from the shoulder to the semi-conic base. The surface of the body is smooth, and in its entirety the jar is a good example of Iroquois ornate earthenware. The top of the vessel is squarish, but instead of the angle projections usual in receptacles of this class, there are two almost level sides, with the opposing ones higher and gracefully rounded. The lip is flat and without decoration save on the outer edge which is embellished with a line of small, punctate dots, below which are three encircling, incised lines. The encircling band of design covering the major part of the frieze is composed of an intricate series of incised pyramids formed of lines and dots, the intervening spaces being filled with similar lines. Diameter of body, $5\frac{3}{4}$ in.; diameter of rim, $4\frac{1}{2}$ in.; height, 7 in.

Among the fragmentary Iroquois vessels there were only a few that formed parts of large jars. One of these is shown in plate xxiv, *b*. It is of dark color; the body, shoulder, and neck are plain; the lip is missing. The frieze design is formed by heavily incised lines forming pyramids, the intervening spaces being filled with horizontal lines. The lower margin of the frieze has a row of indentations. Height 10 in.; diameter 9 in.

The complete rim and about half the body of a large jar (pl. xxiii, *a*) was found in Pit 2, in the eastern part of the mound. The body is plain; the neck is broad and incurved. The rim-

collar, or frieze, is broad and angular, causing the mouth of the jar to be practically square. The four angles of the frieze are emphasized by low, rounded lip-projections, encircled on the lower part by a pseudo-textile ornamental design consisting of combinations of straight incised lines and dots arranged in zones. At each angle there is a pyramidal figure, and between the angles are broad, vertical, incised bands, above which is a series of four incised encircling lines. The frieze is bordered by marginal rows of indentations, those on the upper portion having been applied with the edge of an angular punch, the lower being larger and deeper, having a slight node in the upper part. The form of this vessel was evidently suggested by the bark receptacles of the region, the curves and angles of the upper part practically duplicating certain birch-bark vessels. Height 11 in.; diameter $9\frac{1}{2}$ in.

Plate XXII, *a*, illustrates the rim and upper portion of a large jar. As in most vessels of this type, the body portion evidently was plain. The neck also was without decoration, and the upper part is broadly outcurved, giving the frieze a decided overhang. The shoulder is ornamented with a broad band consisting of four incised encircling lines bordered on the upper part by short, oblique incisions and on the lower margin by lightly incised, oblique, ray-like lines. The top of the frieze is tripointed. Two of the line projections are comparatively low and pointed, and are equal in size; the third is higher, much larger, and rounded, and is accentuated by a series of eleven transverse, impressed notches. The lip is square and is unembellished save by a row of slight notches on the outer edge, and, as noted, on the large projection. The frieze is circular, there being no suggestion of angles below the projections; its major part is covered with a closely-applied series of oblique incisions, and the upper portion is bordered by an encircling band composed of four wavy lines. Diameter of rim, $8\frac{1}{2}$ in.

A fragment of a small jar is shown in plate xxv, *b*. The body surface shows the typical smooth finish of Iroquois ware, and is without decoration save on the shoulder, where there is a band of slanting, wheel-made lines. The frieze is decorated with a band of four horizontal fillets having the appearance of heavy coiling; and



PORTIONS OF RIMS OF VESSELS SHOWING TYPES OF FRIEZE DECORATION

above and below, the frieze is margined by a line of slanting, wheel-made lines. The edge of the lip is plain.

EARTHENWARE SHOWING ALGONQUIAN AND IROQUOIS TECHNIQUE
COMBINED

As before stated, among the fragmentary vessels found in the mound were four that combined the technique of both the Delawares and the Iroquois.

Plate XXVI shows half of a small globular jar of Iroquois shape, the surface of which is paddle-marked. The frieze is covered with incised lines, and the general effect is crude in comparison with typical jars of either the Algonquian or the Iroquois. There is a lip-projection, and the frieze below it is covered with crudely scratched lines. Encircling the central portion of the neck is an incised band—an unusual neck decoration. Height $5\frac{1}{2}$ in.; diameter $4\frac{3}{4}$ in.

A fragment of the rim portion of one of these jars has a lip-projection that characterizes Iroquois vessels, but the mixture of the clay and the general treatment of the surface are purely Algonquian. Two other rim fragments show similar characteristics, but whether made by the Delawares or not, they are Algonquian in texture, form, and general treatment.

PITS CONTAINING JARS

The pits containing fragmentary jars, and in one instance a perfect one, are represented by dots on the plan of the mound (pl. II). These pits in most instances were several feet from the nearest skeleton, Pit 11, for example, being more than a hundred feet distant from Skeleton 3.

All the pits contained sherds representing either all or a portion of a jar, and in many of the pits were fragments of several jars. In most of the pits the sherds showing decoration were deposited with the ornamented surface down, but whether this was intentional could not be determined.

The rims of most jars are decorated with a frieze. As this part of the vessel usually is the only ornamented portion, the rim fragments present many of the decorative elements employed by the Minisink potters and in the absence of complete jars are worthy

of study. Many sherds showing rim-decorations were found. A number of these, exhibiting distinctive designs, are illustrated in plate xxvii.

The presence of animal bones and charcoal in most of the pits seems to indicate that the deposit had been made in connection with a feast, the remains of which were buried with the vessels.

Objects of a utilitarian nature were found in some of the pits; these included hammerstones, lap-stones, arrowpoints, a fragment of a pipe, etc., but in none of them were ornaments such as were found with the burials.

The following descriptions of the individual pits indicate the depth of the deposits, their general character, and the material found in them.

Jar 1, found southeast of Skeleton 2, was represented by a rim fragment which lay in a disturbed area 2 ft. 9 in. beneath the surface.

Jar 2 was found at the bottom of a discolored area, southeast of Skeleton 4, the fragments being grouped with the outer or design surface down as though they had been placed in the positions in which they were found, not merely thrown into the hole. They were 2 ft. 9 in. below the surface and occupied a space about two feet in diameter. A great many pieces of charcoal were associated with the fragments. The entire rim was found, also part of the base and sides. This jar is shown in plate xxiii, *a*.

Jar 3 was northwest of Skeleton 7 and was represented by a mass of fragments scattered over a space two and one half feet in diameter. It was near Skeleton 7, but evidently had no connection with it, as there were two distinct disturbed areas over the two deposits. The fragments were those of a very large jar and were so placed as to have the appearance of a mosaic, most of them being on the same level.

Jar 4, northwest of and near Skeleton 13, was represented by a number of fragments scattered over an area two feet in diameter. It was 3 ft. 2 in. below the surface, and at the bottom of a discolored area, but no animal bones were found with it.

Jar 5 was southeast of Skeleton 27; it consists of half of a



a. NET-SINKERS OF THE SMALL THIN TYPE



b. NET-SINKERS OF THE PEBBLE TYPE



a. GRINDING STONE



b. DOUBLE-HANDED HAMMERSTONES

slender vessel and was found 17 in. below the surface, in a disturbed area. Near it were several large stones, some charcoal, and a few potsherds. (Pl. xxvi.)

Jar 6, found 11 in. below the surface, northeast of Skeleton 28, is represented by a fragment of a very thick jar, mingled with which were sherds of other vessels. There were also three hammerstones, an arrowpoint, and a fragment of a pottery pipe. As in the former deposits, animal bones, shells, and charcoal were found in association.

Jar 7 was southwest of Skeleton 27 and was represented by about half the original vessel; it was lying with the design side down and with the rim portion directed toward the west. Grouped about it were fragments of other vessels, all of the decorated pieces having the ornamented surface down. The deposit contained also five large, heavy, pitted hammerstones, a lap-stone, a number of split stones, and the usual charcoal and animal bones. The deposit lay 3 ft. below the surface.

Jar 8, southwest of Skeleton 28, was in a fragmentary condition and the pieces were massed in an area eighteen inches in diameter. It was 18 in. below the surface, and was surrounded by the usual charcoal and animal bones. The decorated pieces were all lying with the design surface down.

Jar 9, northwest of Jar 3, was fragmentary and the pieces were grouped, all the ornamented frieze portions lying with their decorated sides down. It lay 2 ft. 6 in. beneath the surface.

Jar 10, southwest of Skeleton 26, was 19 in. below the surface, in a discolored area and broken into many pieces. Two of the rim fragments were lying with the design side up. In the center of the mass were two stones.

Jar 11 was found in a test trench and lay 123 ft. south of Skeleton 1. It was represented by fragments found 1 ft. 8 in. below the surface. Three or four large pieces were lying with the design side up, but with these exceptions the sherds lay with the ornamented surface down, as in most other cases.

Jar 12 was found 4 ft. 4 in. below the surface, southeast of Skeleton 3, and was accompanied with a fragment of a pipe.

Jar 13, fragmentary, was found north of Skeleton 17, 2 ft. 6 in. below the surface, all the decorated faces downward.

Jar 14, also fragmentary, was south of Skeleton 61 and lay 2 ft. 8 in. beneath the surface. All the decorated sides were down.

Jar 15, entire, was west of Skeleton 56 and was found 1 ft. 8 in. down, lying on its side, inclined at an angle of 30°. The rim was upward. (Pl. xxv, *a*.)

Jar 16, broken, was east of Skeleton 63 and lay bottom upward 2 ft. 2 in. below the surface.

Jar 17, broken, was found only 2 in. below the surface. It was west of the burial area and 30 ft. northwest of Skeleton 63.

Jar 18, likewise broken, lay 1 ft. 8 in. down. It was northeast of Jar 17.

Jar 19, north of Skeleton 60, and also broken, was found 4 ft. below the surface.

OBJECTS OF STONE

Objects of stone are represented by most of the artifacts of this material known to the region under discussion.

As the Munsee of the Delaware River region must have subsisted to a considerable extent on fish, one would expect to find net-sinkers in their refuse heaps and on their village sites. Our excavations resulted in the finding of 166 of these objects, many of them at a depth of more than three feet. Three types of net-sinkers are represented. One of these types, shown in plate xxviii, *a*, is made of a thin section of sandstone, or of other stone having a regular line of cleavage. Many of this class are quite small, measuring only 2 in. in diameter; there are 99 of these. Net-sinkers of the second type (pl. xxviii, *b*) are made from pebbles. The edges of the specimens of the first type were chipped or ground to a greater or less extent, whereas in the second type the only evidence of workmanship is in the notches chipped or ground in the opposing edges of the stone. Of this class there are 48 examples in the collection. Those of the third type also are made of pebbles, ovoid or irregular in shape, and each has an encircling groove usually pecked in the surface. As in most



a



b

PITTED HAMMERSTONES

eastern localities, this type was the most unusual, only 19 having been found.

Hammerstones of many sizes and shapes were recovered; these range from the heavy, two-handed hammers, some of which measure 9 in. in length by 3 in. in thickness, to the very small ones used for pecking the surface of implements in the process of their manufacture. There are eight of the heavier class, two of which are shown in plate XXIX, *b*. These are natural boulders, but all show evidence of use, some being deeply pitted, while others have but slight artificial depressions.

Small pitted hammerstones from the mound are shown in plate XXX. There are 49 of these, ten of them having been used secondarily as rubbing stones.

Various other forms of hammerstones are represented, many of them being elongate, in which cases one of the ends of the implement exhibits wear.

There are few grooved axes and mauls, three of the former and one of the latter being the only ones unearthed.

Ten smoothing stones were found, and there are six large, flat stones that evidently had been used for grinding. One of these, shown in plate XXIX, *a*, measures 17 in. by 15 in., and is 3 in. thick. Both surfaces are smooth, but the surface presented in the illustration shows considerable wear. The second in size is in the form of an irregular disc, averaging 9 in. in diameter and $2\frac{1}{2}$ in. in thickness. The edges of both of these specimens have been worked, but the smaller one has the entire edge chipped. Implements of this class are sometimes called "lap-stones," but as many of them are large and heavy and exhibit use for grinding purposes, they were probably employed for grinding grain as are the metates of the Southwest.

In the collection are eighteen celts, only three of which are perfect, and four chisels which are shown with some of the celts in plate XXXI, *a*. Included in the collection are also sixteen pestles (examples of which are shown in pl. XXXI, *b*), hoes (pl. XXXII, *a*), scrapers (pl. XXXIII, *b*), pecking stones, "turtle-backs," discs, arrow and spear points (pl. XXXII, *b*), drills, reamers, two sinew

smoothers (shown in plate xxxiv, *b*), a fragment of a large discoidal stone, catlinite beads, and a stone shaped as if for use as a pendant or gorget, $4\frac{1}{8}$ in. long, $4\frac{1}{4}$ in. wide, and $\frac{1}{8}$ in. thick (pl. xxxiii, *a*). This object was not drilled; but another, somewhat shorter and thicker (pl. xxxiii, *b*), shows the original drilling, which had broken out, as well as two attempts to drill new holes.

While conducting the explorations in the Bell Mound a large stone spade was found on adjacent property, but owing to its size is worthy of mention here (pl. xxxiv, *a*). This object is made of a hardened shale approaching slate, from which flakes have been chipped; it measures $10\frac{1}{2}$ in. in length and 5 in. in width, and the point shows wear from use. Spades of this size and type are not often found in the region under consideration, and it is possible that it may have been derived from another section, although the material might be from the Delaware valley.

A catlinite pipe was found by a farmer in a field a short distance from the Bell farm and was acquired from him for the collection. This specimen (pl. xxxiii, *a*) is $1\frac{1}{2}$ in. long and $1\frac{1}{4}$ in. high. The edges are ornamented with incised designs as shown in the illustration. As beads of catlinite, or pipestone, were found with skeletons as well as in the general excavations at Minisink, barter for this material may have been conducted by the Delawares and Iroquois in early times. Loskiel,¹ in speaking of the Delawares, says:

They are fond of a handsome head for their pipe, and prefer those made of red marble. But these are only used by the chiefs and captains, this sort of marble being rare, and found only on the Mississippi.

Dr Charles Rau,² writing in 1872, says:

Not long ago a small Catlinite pipe of unusual shape was sent to me, which had been ploughed up in a maize-field near Centreville, in Southern Illinois (St Clair County). Such older specimens are even met in the New England States, near the Atlantic coast. The collection of the Smithsonian Institution contains some pipes and ornaments made of

¹ *History of the Mission of the United Brethren Among the Indians in North America*, London, 1794, p. 51.

² *Ancient Aboriginal Trade in North America, Smithsonian Report for 1872*, p. 372.



a. CELTS AND CHISELS



b. PESTLES



a. HOES



b. ARROWPOINTS

Catlinite, which were taken from Indian graves in the State of New York, or obtained from the Iroquois still inhabiting the same state. The raw or worked red pipestone, therefore, constituted an article of barter, which was brought from its original place of occurrence to the present Eastern states of the Union.

OBJECTS OF SHELL

Independent of burials were several deposits of freshwater clam shells, found in connection with feast-pits, but none of the shells showed signs of use. Snail-shells also were found in some of these pits, but whether they had been buried intentionally or had simply been in the surface soil with which the pits were filled could not be determined. Among the worked-shell objects, not associated with burials, was the columella of a small whelk, a few fragments of sea-shells, a tubular bead, and a number of fragments of other beads.

OBJECTS OF BONE AND ANTLER

Comparatively few bone implements were found in the mound, but many bird and mammal bones were present in the feast-pits associated with burials. The bird-bones were mostly those of the turkey; the mammals represented were the deer, elk, dog or wolf,

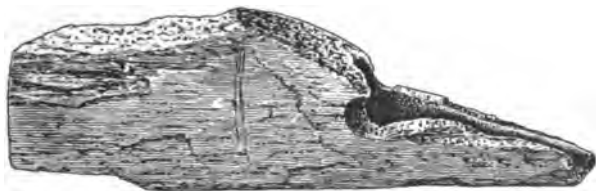


FIG. 21.—Bone knife handle.

fox, beaver, and a number of smaller animals. Bones of the larger mammals, split for obtaining the marrow, were found in all the feast-pits. A few of the bones showed the marks of animal teeth.

Among the bone objects found apart from the graves is a knife-handle (fig. 21), in fragmentary condition, but sufficiently preserved to show that it had been 3 in. in length and 1 in. in width. A hole

had been drilled through it for the insertion of a peg to hold the blade in place.

Ten bone awls were recovered. Seven of these are made from split fragments of deer-bone, the ends of which have been pointed. Plate x, B (*a-e*) are of this type; *f* was found with Skeleton 44; *g* is an unfinished awl of the slender type.

One bead, made from a bird-bone, the ends of which are squared, was found; likewise the toe-bone (phalanx) of a deer, one end of which has been cut off, the other perforated, probably for use as a gaming die; and a few bones that show evidence of cutting.

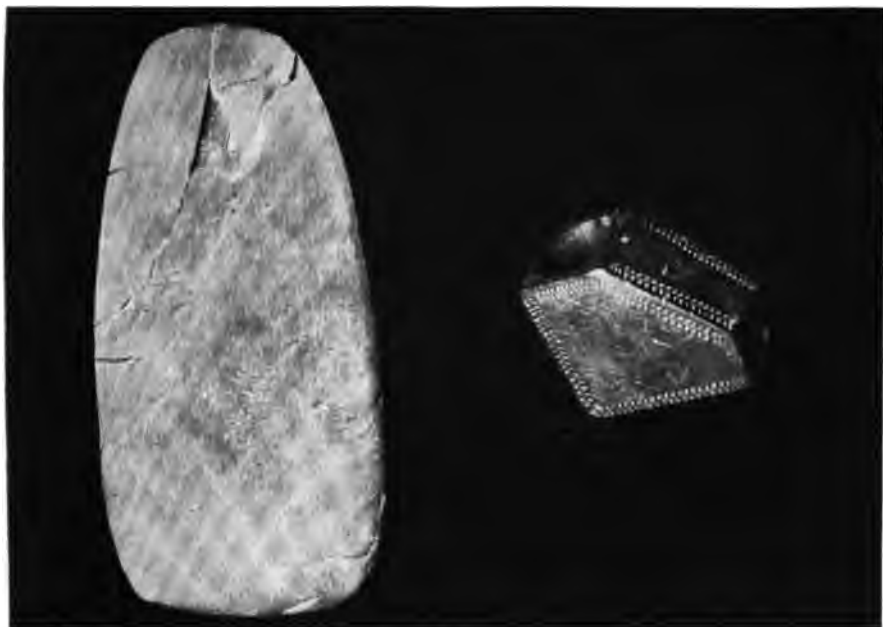
We may include here a fragmentary drinking-cup made from the carapace of a box-turtle.

Many pieces of deer-antler were found, but only a few that exhibit signs of artificial treatment. Some of the larger pieces have been gnawed by animals (pl. x, A, *a*), and others show the marks of cutting implements (pl. x, A, *c*). Fourteen prongs of antler, some of which were probably used as bodkins, are among the objects recovered. There are also two antler arrowpoints (pl. x, A, *b, d*), one short and massive, measuring 2 in. in length, the other shorter, more delicate in form, but not so well preserved. These arrowpoints of antler were the only ones found during the course of the investigations.

PIPES

Only one complete native pipe was found apart from burials: this was in the western part of the mound and was lying at a depth of 8 in. below the surface, immediately above a deposit of shells measuring 2 ft. 6 in. in diameter, 2 ft. thick, and 2 ft. beneath the surface. Under this deposit, 3 ft. below the surface, was a layer of burned stones 6 in. thick.

Similar shell deposits were found in other parts of the cemetery. Not far from Skeleton 25 was a mass of ashes and calcined shells measuring 2 ft. by 3 ft., and nearly 3 in. in thickness. It was surrounded by fragments of pottery, charcoal, and animal bones. This deposit lay 14 in. below the surface and had evidently been the result of a mortuary feast-fire.



a. PENDANT-SHAPED STONE FROM THE MOUND, AND CATLINITE PIPE FROM A FIELD NEAR THE BELL FARM



b. A PENDANT AND FOUR SCRAPERS

The pipe above referred to (pl. XII, *c*) is of pottery, is 6 in. long, and was in two pieces. It is of light-colored ware; the stem is flattish on the upper and lower surfaces, broad near the bowl, and tapers to a rounded point at the mouth-piece. The flaring bowl has a projecting rim, the lip of which is decorated with a series of parallel, incised lines.

A fragment of another earthenware pipe, not connected with a burial, was found (fig. 22). The stem had been broken and

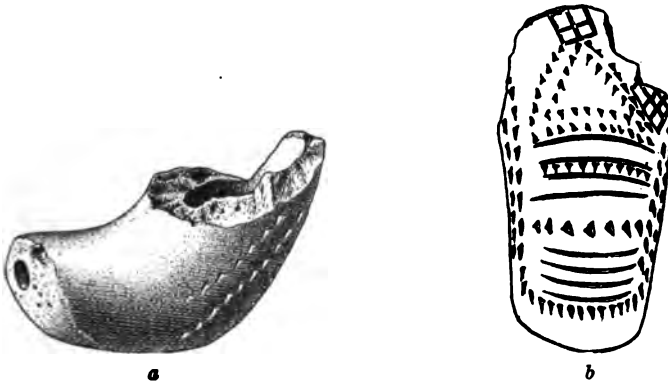


FIG. 22.—Fragment of a pottery pipe (*a*), and the design thereon (*b*).

its end smoothly ground. The bowl also is broken, but the remaining portion shows that it had been decorated with a series of incised lines and angular indentations.

The two pipes described, together with seven pottery stems and a fragment of a pipe-bowl, are the only examples of aboriginal pipes found apart from burials.

Although a number of European trade-pipes were found with skeletons, there was none elsewhere in the mound. Five fragments of stems of clay trade-pipes were found, however, some of which may have been used as beads.

OBJECTS OF METAL

Only one metal object was found aside from those associated with burials. This is the bowl of a brass spoon, drilled at the handle end probably for suspension as an ornament (pl. XVII). A piece has been cut from the edge.

OTHER MATERIALS FOUND

Charcoal was present in all parts of the mound where disturbed earth was encountered. Through the upper soil it appeared in small pieces, but at the bottom of the feast-pits large pieces occurred. Walnuts were found in various parts of the mound, but as a walnut tree is growing on the mound its fruit may have been carried to the lower levels by burrowing animals.

CONCLUSIONS

The cemetery which formed the subject of the investigations described in this paper was associated with a village of the Munsee tribe of the Delaware Indians, as shown by documentary evidence, supported by our archeological studies. The date of the abandonment of the Minisink village has not been determined, but from the information available its inhabitants departed from the locality in the early part of the eighteenth century, after years of contact with white people. This is indicated by the presence of various articles of European provenance in association with the burials, such as objects of metal, trade-pipes, glass beads, etc., and by the fact, as determined by Dr Hrdlička, that one of the skeletons found in the Minisink cemetery is that of a white man. If it is finally shown, as some authorities now believe, that burials of the dead were not made in a fully extended position until after missionaries had impressed their teachings on the aborigines of this region, we have additional evidence, if such were needed, of the effect of the contact of civilization on the natives of Minisink, as twenty-eight of the forty-five burials whose position of burial was determinable, were interred in this manner. In a report of investigations of the Van Etten site, farther up the Delaware river, near Port Jervis, New York, some of the graves contained wooden coffins, and in each such case the associated burial was in an extended position.

The exploration of the Minisink cemetery has furnished considerable objective material for comparative study, but more is required. It is regretted that a greater number of perfect vessels of pottery was not recovered, as the ceramic art of this Algonquian



area is not adequately represented in our museums. Nevertheless, both the entire vessels and the fragmentary jars from Minisink have supplied information of importance with respect to form and ornamentation, and show the influence of Iroquois people on the Algonquian inhabitants of the site in question, under whose domination the latter are known to have been during the early historical period. Other artifacts are likewise of interest and importance: the objects of shell exhibit a considerable range of form and ornamentation, and with the pottery attest to the esthetic sense of the Minisink people. This is the more noteworthy because of the fact that only thirty of the sixty-eight skeletons were accompanied with objects of any kind, and several of these had merely a piece of stone, a rock crystal, a bear's tooth, or a fragment of pottery. In some Eastern burial sites stone implements were deposited with the dead, but none was found with the burials at Minisink, whose inhabitants seem to have conferred on their departed few objects of a utilitarian character. Possibly this discrimination may be another indication of missionary influence. Regarding the mortuary customs of the Delawares, Loskiel,¹ the Moravian missionary, wrote in 1788:

"They used formerly to put tobacco pouch, knife, tinder box, tobacco and pipe, bow and arrows, gun, powder and shot, skins and cloth for clothes, paint, a small bag of Indian corn or dried bilberries, sometimes the kettle, hatchet, and other furniture of the deceased, into the grave, supposing that the departed spirits would have the same wants and occupations in the land of souls. But this custom is almost entirely abolished in the country of the Delawares and Iroquois."

Of particular value to the study of the archeology of the Delaware valley will be the report on the skeletal remains now in preparation by Dr Aleš Hrdlička of the United States National Museum, to which institution the human bones were presented by the Museum of the American Indian. In his study of the crania from the Minisink cemetery Dr Hrdlička has noted an unexpected form, resembling the Shawnee crania far more closely than those of other Algonquian tribes, including even the Delawares. These inter-

¹ *History of the Mission of the United Brethren*, p. 120, London, 1794.

esting observations will be set forth fully in Dr Hrdlička's report, which will include comparative data on the crania of the tribes which formerly occupied the Atlantic seaboard.

The valley of the Delaware still offers many possibilities in the way of archeological research. A careful survey will no doubt bring to light numerous village sites of a more ancient period, and their cemeteries will doubtless yield many artifacts of value to the study of our aboriginal tribes. It is hoped that the results recorded in this paper may prove useful to future students of this interesting field.

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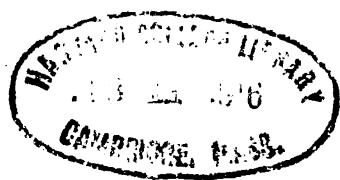
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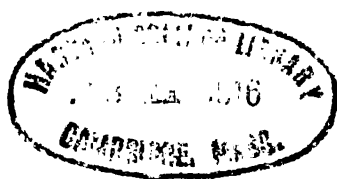
**THE NANTICOKE COMMUNITY OF
DELAWARE**

**BY
FRANK G. SPECK**

**NEW YORK
THE MUSEUM OF THE AMERICAN INDIAN
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THE NANTICOKE COMMUNITY OF DELAWARE

BY

FRANK G. SPECK

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INTRODUCTION

DURING each winter and spring since 1911 I have spent as much time as was available in ethnologic work among the mixed-blood descendants of the Nanticoke Indians living in several communities in southern Delaware. Dr W. D. Wallis, at the instance of the University Museum, University of Penn-

sylvania, also had a share in the commencement of this investigation. These people, who occasionally have been reported in papers and journals,¹ form two bands, the nuclear band living in Indian River Hundred, Sussex county, the other, supposedly an offshoot, residing at Cheswold, Kent county. The members of the bands together are roughly estimated to number about 700. These people form self-recognized communities, with their own schools and churches, and possess a decidedly endogamous tendency which refuses particularly to recognize marriage with negroes. They style themselves variously "Nanticokes," "Moors," and "Indians." This feeling of local seclusiveness is a marked trait among these people and was noted by Babcock who visited the tribe in 1899 and wrote a short but interesting account of what he saw.²

Physically the community exhibits a great lack of racial homogeneity, the types of physiognomy, color, and hair ranging from the European, the mulatto, and the Indian through all the usual gradations. Some individuals have straight hair, fair skin, and blue eyes; some have brown skin and kinky or curly hair; others have broad faces and straight, black hair, the color and general appearance of Indians. It is common to find these characteristics divided irregularly among the members of the same family.

An interesting tradition current among the members of the band is that they are descended from a crew of Moorish sailors who

¹ See James Mooney, "Siouan Tribes of the East," *Bulletin 22, Bureau of American Ethnology*, pp. 12, 51, 80, Washington, 1895. Mooney, "The Powhatan Confederacy, Past and Present," *American Anthropologist*, 1907, vol. IX, pp. 129-152. *Encyclopædia Britannica*, Eleventh ed. (1910-11), p. 948, article "Delaware." "In Indian River Hundred there lived a community of people—many of whom are of the fair Caucasian type—called 'Indians' or 'Moors': they are now quite generally dispersed throughout the State, especially in Kent and Sussex counties. Their origin is unknown, but according to local tradition they are the descendants of some Moorish sailors who were cast ashore many years ago in a shipwreck; their own tradition is that they are descended from an Irish mother and a negro father, these children having intermarried with Indians of the Nanticoke tribe. They have where practicable separate churches and schools, the latter receiving state aid." Brinton, *The Lenape and their Legends*, p. 22-25, Phila., 1885, gives a review of Nanticoke history and some notes on their ethnology.

² William H. Babcock, "The Nanticoke Indians of Indian River, Delaware," *American Anthropologist*, n. s., 1899, vol. I, pp. 277-282. The author does not give any ethnological information, but he describes the appearance of the people.



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(THE UPPER PORTRAITS ARE FULL-FACE AND PROFILE OF THE SAME BOY)

were shipwrecked near Indian River inlet, escaped to the shore, and intermarried with the Indians who were living there. This story is well known in the region and is repeated with several variations. One states that on board the wrecked vessel was an Irish princess; another claims that the vessel was owned by a Moorish prince; another that the Moors were pirates from the Spanish main, and to this they attribute their local name of "Moors." As important as this story seems to be, I was unable to secure any consecutive version worth recording as testimony in the words of the narrator. Those who know of it give only the general facts as mentioned above. A few discredit the story altogether. On the whole, however, I am inclined to credit the general claim that Moorish sailors might have been shipwrecked on the treacherous shoals off the southern Delaware coast and come ashore to the shelter of the Indian natives. When this might have happened it is difficult to say, unless we assume that it was during the years of piracy on the high seas in the seventeenth and the early part of the eighteenth century (1650-1720 approximately). The importance of the term "Moors" in connection with the pirates of the West Indies suggests relationship in this case. (See Appendix.)

As may be observed in the portraits accompanying this paper (pl. II-XI) the appearance of even the most negroid of these people is quite different from that of the common Southern negro type. They are much more refined in appearance, with thinner lips and narrower noses. Heckewelder¹ says that the Nanticoke were distinguished from neighboring tribes by a darker color. Writing at this date, if we assume the story of the Moorish admixture to have some foundation in truth, one does not have to seek far for an explanation of the dark complexion of the Nanticoke.² It would seem that the tribe bore evidence of an African admixture before leaving Maryland, which would be before 1748, at the latest. The "Moor"

¹ J. G. E. Heckewelder, *An Account of the History, Manners and Customs of the Indian Natives who once Inhabited Pennsylvania and the Neighboring States*, Phila., 1819.

² The Canadian Nanticoke are still conscious of their reputation among the Iroquois for having a dark complexion. In addition, at the Grand River reserve they are humorously accused of having large feet.

story would then date from about 1700, which is indeed the most likely period for it.

Another question in this connection is, How far might northern African influence have survived in industry and folklore? Family names betray only English origins, with one exception: that of "Bumbery" may indeed possibly be a corruption of *Barbary*.¹ African influence, however, is shown most conclusively by the fact that a list of Nanticoke numerals (1 to 10) recorded by Pylæus, a missionary to the Mohawk in 1780, proved, through the investigations of Dr Brinton,² to be Mandingo or a closely related West African language.

Although the Moors or Nanticoke were included with the "colored people" during slave days, none of them were ever held as slaves. They claimed the right to carry firearms, and in the local court forty or fifty years ago one of their number won a case, arising from the ownership of firearms, by proving himself to be a "native Indian without a drop of slave blood in his veins." In recent years, as the outcome of an effort led by one of the band, Mr W. R. Clark, the Nanticoke have secured legal recognition at the Delaware State capital as Indians and exemption from regulations applying to negroes.

Reverting again for a moment to the question of English ancestry, we find that the band speaks a dialect of English distinct from that spoken in other parts of Delaware and Maryland. In another part of this paper I have noted some phonetic peculiarities and words and expressions peculiar to the community, which with tracing the family names³ may some time afford a clue respecting its

¹ The same family name (*Bounberri*), strange to say, is found among the Canadian Cayuga. The Cayuga are said to have adopted the Nanticoke in 1753. It is just as likely, however, that the name is from Vambery.

² Cf. *American Antiquarian*, 1887, vol. ix, p. 352.

³ The names of families of the Nanticoke community in Sussex county are here given. They comprise a majority of the inhabitants of the district known as Indian River Hundred, from near Millsboro eastward along the northern shore of Indian river to near Lewes, and northward nearly to Georgetown. These names are: Rogers, Jackson, Wright, Thompson (part negro), Harmon, Street, Norwood, Coursey, Morris, Clark, Johnson, Drain, Moseley, Sockume, Burton, Davis, Bumberry, Layton, Miller, Thomas, Cormeans, Hanzier. They have the peculiarity of calling the children by the parents' names, as Levin's Isaac, Noah's Jim, Eliza Ann's Jane, etc.



NANTICOKE TYPES

(THE UPPER TWO AND THE LOWER LEFT-HAND BOYS ARE BROTHERS)

derivation. A comparison of these with the family names and dialectic peculiarities of the so-called Croatan settlement in North Carolina is interesting, because the latter are in a somewhat similar position, being reputed descendants (with little basis of fact, however) of colonists from southern England, conducted to America by Sir Walter Raleigh (1587), who became merged with the natives of the coast. In comparing the vernacular and family names of both communities we find no correspondences.¹

Finally, in discussing the origin of the Nanticoke community we should not overlook the fact that one at least of the older men, Lemuel Sockume, claims that their Indian ancestors were Cherokee. I do not know how to coördinate this assertion with the known facts of the case, unless it be that Cherokee at some time joined the Nanticoke band and left descendants there. Some of them claim also a trace of French blood.²

Unfortunately nothing of the Nanticoke language remains, not even a trace.

Part of my task among these people was the gathering of ethnological specimens. Accordingly a collection of about one hundred objects of industry were obtained from the older families, illustrating life in past generations. This collection is now in possession of the Museum of the American Indian in New York, in whose interest the latter part of the investigation was conducted. The illustrations of objects in this paper are from drawings of the originals in that Museum.

Considering the value that the following fragments of material life and folklore may have, either from the point of view of survivals of Indian culture or as possible secondary independent folk developments, I shall include a few introductory historical references.

¹ An interesting study of the Croatans of North Carolina has been made by H. McMillan, *Sir Walter Raleigh's Lost Colony*, Raleigh, N. C., 1907, pp. 35-36. Cf. also N. E. Fitch, "The First Founders in America, with Facts to Prove that Sir Walter Raleigh's Lost Colony was not Lost," *N. Y. Society of the Order of the Founders and Patriots of America*, 1913, p. 39. Incidentally these authors both refer to the use of the wooden crossbow, an article borrowed from the early explorers and found among the Algonkin tribes as far as the Montagnais of Labrador.

² The family name of Hanzier (pronounced Hä'nzer) is said to be of French origin. Mrs Bumbery says that her grandmother, who was a Hanzier, could speak French.

HISTORY

The Nanticoke Indians of southern Delaware were first encountered in 1608 by Captain John Smith.¹ They then occupied the peninsula between the Atlantic ocean and Chesapeake bay. Smith spoke of them in the following terms:

"We set saile for the maine; and fel with a faire river on the East called Kuskarawaocke. By it inhabit the people of Sora-phanigh, Nause, Arsek, and Nautaquake, that much extolled a great nation called Massawomekes . . ."²

"On the east side of the Bay, is the river Tockwhogh, and upon it a people that can make 100 men, seated some seaven myles within the river: where they have a Fort very well pallisadoed and mantelled with barkes of trees. Next them is Ozinies with 60 men. More to the South of that East side of the Bay, the river Rapanock, neere unto which is the river Kuskarawaock. Upon which is seated a people with 200 men. After that, is the river Tants Wighcocomoco, and on it a people with 100 men. The people of these rivers are of little stature, of another language from the rest [referring to the Powhatans], and very rude. But they are on the river Acohanock with 40 men, and they of Accomack 80 men doth equalize any of the Territories of Powhatan, and speake his language; who over all those doth rule as King."³

To bring these related matters together as much as possible, John Smith's map is here reproduced (pl. 1).

Subsequently the Nanticoke are heard of through their connection with the related tribes along the Susquehanna and on the western shore of Chesapeake bay. References bearing exclusively on the Indians who remained on the eastern shore are scanty and convey little information concerning their mode of life. From 1641 to 1648 they were at war with the colonists. By 1748 most of the Nanticoke and Conoy of Maryland had moved up the Susquehanna to the Iroquois, with whom they gradually became affiliated. By 1799 the Nanticoke had sold all their land in Mary-

¹ Captain John Smith's Works (1608-1631). *English Scholar's Library*, edited by Edward Arber, Birmingham, England, 1884.

² *Ibid.*, p. 111.

³ *Ibid.*, p. 351. (1607-09.)



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(THE UPPER TWO ARE FULL-FACE AND PROFILE PORTRAITS OF THE SAME MAN)

land. Since it is not the intention in this paper to deal with the bands of the western shore,¹ nor with the Nanticoke in general after their adoption by the Iroquois in 1753, we shall have to leave the historical documents and depend on local traditions of the people of the region.²

The last authentic reference, however, to the Nanticoke in their old haunts, and the one to which we are indebted for knowledge of the language, is that by William Vans Murray, who in 1792 sent a few ethnological notes and a vocabulary collected at the Nanticoke village of Locust Neck Town, Goose creek, Choctank river, Dorchester county, Maryland, at the instance of Thomas Jefferson.³ In a letter accompanying the vocabulary he wrote that the tribe had dwindled to nine persons. They lived in "four genuine old wigwams thatched over with the bark of the cedar." They were governed by a "queen," Mrs Mulberry. The rest had removed "to the Six Nations . . . They went to the Senecas often." A note to the vocabulary adds that Wyniaco, their last

¹ The inhabitants of the Maryland shore probably formed a separate band of the Nanticoke, differing in some details from those of the eastern shore. An alliance existed between them as late as 1660, according to Colonial records. Since the Canadian Nanticoke came mostly from Maryland proper, they should be classed as a separate band, or at least as one comprising several dialects. One of these, if not the predominating one, was the Conoy or Kanawha, judging by a comparison of the older Nanticoke material with a vocabulary from the present Canadian division of the tribe, and also from a tribal synonym by which the latter are known as Ganáwagohono (Cayuga), "swamp people" (Kanawha).

² During the winter of 1914 I visited the Nanticoke incorporated with the Six Nations of Iroquois at Ohsweken, Ontario, where several hundred descendants still retain their identity as a body in the League. The ethnological results of this trip, with a Nanticoke vocabulary, are being prepared for a special paper on the emigrant portion of the tribe. The Nanticoke in Ontario were greatly interested in learning through me of their kinsmen in Delaware, of whom they had heard occasionally. Some family names are common to both bands. The last actual contact between them, according to the memory of the Canadian Nanticoke, was in the middle of the last century, when several families from the South, presumably from Delaware, were refused admission into the Canadian band on account of their dark complexion. The name of one of these families was Burton, according to memory, which incidentally corresponds with a common family name of those still in Delaware. In 1857 the Canadian Nanticoke sent a chief (Cornelius Anderson) and two delegates to Maryland to look up survivors, but they found none there.

³ D. G. Brinton, "A Vocabulary of the Nanticoke Dialect," *Proceedings of the American Philosophical Society*, vol. xxxi, 1893, pp. 325-333.

"king," had died about 75 or 80 years before and that his body was kept preserved in a mortuary house. The custom of preserving the bones of the dead was early recorded of the Nanticoke. The names of two Nanticoke villages are given in this notice, "*Amanamo quun*, the name of the Indian town of Locust Neck. *Mattap-penen*, the name of the Nanticoke Indian town." Beverley¹ in 1722 mentioned the principal village of the tribe as Nanduge, with 100 inhabitants, ruled by an "empress."²

Regarding tribal identity and history, a few interesting fragments of tradition survive among the people. The Nanticoke are said to have inhabited the coast and inlets no farther north than Indian river. Inland, however, they ranged westward across Chesapeake bay. Evidently the present remaining descendants of the tribe at Indian river were the nucleus of those who stayed in Delaware after the general break-up of national life, before 1748. The country north of the Indian River district, according to surviving tradition, was neutral ground between the Nanticoke and the Delawares proper, who, the former assert, were not always on the best of terms with the Nanticoke of Indian river. This would make the ancestry of the Cheswold branch of the Indian remnant in Delaware not fundamentally Nanticoke, but Delaware. Of course it should be remembered that intermarriage and removals have been frequent between the two bands, so that now, to all intents, they are practically the same, differing only in the degree of white and negro intermixture. According to Mr Clark's testimony, early in the last century many families emigrated from Indian river to the west, for the purpose of joining some tribes nearer, or across, the Alleghanies. This probably refers to the general Indian emigration from the coast to the adjacent slope, during the middle of the eighteenth century, with the Delawares and others.

Subsequent to this movement representatives from the departed band occasionally returned to Indian river to visit their friends and relatives; particularly to visit old Mrs Lydia Clark, the grand-

¹ *History of Virginia*, 2d ed., London, 1722. Possibly *namôq'wan*, "fish catching," and, *nadâpenan*, "landing place."

² Among the Canadian Nanticoke the term "emperor," denoting head-chief, is still in use.



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(THE UPPER TWO ARE PORTRAITS OF THE SAME MAN. THE LOWER LEFT-HAND PORTRAIT IS THAT OF HIS SON)

mother of our chief informant, Mr W. R. Clark, who was then the only person who spoke the Nanticoke language and who wore in part the native costume. After her death, probably between 1840 and 1850, these Indians did not come again, and the Indian River remnant was left without communication with its kin. Again, however, a number of families emigrated from Indian river.¹

These seem to have been the last important events in the history of the community, excepting the occasion of a church quarrel over the admission of negroes to church and school privileges, which resulted in the division of the band into two factions. The original exclusive party is still known as the Indian River or Warwick Indian community, the seceders, who admit social rights to outsiders, calling themselves the Harmonia people. These later distinctions, however, are of minor importance.

PHYSICAL CHARACTER OF THE REGION

A few words concerning the physical character of the Nanticoke country will not be out of place. The surface is extremely flat; the land a sandy bottom without stones, a fact that becomes important when it is remembered that all the stones (steatite, jasper, quartz, chert, etc.) used in making implements by the original natives had to be imported from the western shore of Chesapeake bay or overland from north of Dover. The geographical features of the section are characteristic of the Atlantic coastal plain to which it belongs, not differing noticeably from the Carolina coast.

Tall, columnar, yellow pines and spruce pines form the forest growth that still covers much of the Indian River country, but this is interspersed with oak, sassafras, holly, maple, cedar, dogwood, and smaller trees. In spring the white dogwood blossoms show brightly through the dark pines, but give place to the dryer green-

¹About 1855 some fifty members of the Sockume, Miller, and Norwood families moved to San Francisco, California, where their descendants still live. In 1865 members of the Johnson and Harmon families moved to Blackwood Town, New Jersey. For many years there were Nanticoke colonies in Gloucester, New Jersey, and Philadelphia. In 1870 about fourteen Clarks, Millers, and Johnsons moved from Gloucester to near Detroit, Michigan, and in 1887 six of the Thomas family moved from Philadelphia to Nova Scotia.

ness of midsummer. The leaves fall late in October or early in November. More or less continued cold weather comes by December and lasts through February, during which snow is common, though not remaining on the ground for more than a day or two at a time. Frost does not penetrate deeper than a few inches, and does not remain more than a few weeks. Seasons during which Indian river freezes over for more than a few days at a time are rare. The summers, as might be expected in this locality, are hot and humid. Mosquitoes are very troublesome and cause considerable ague, as one might suspect from the number of herb cures for this malady to be listed later.

AGRICULTURE AND FOOD

In the present-day life of the community no industry shows more surviving native characteristics than that pertaining to corn. Of the four varieties of native corn raised, two of them, the white and the yellow, are early; the others, namely, "sheepshank," or flint, and popcorn, are late. Incidentally the same varieties were recorded among the Virginia Indians by Robert Beverley in 1722.¹ The "sheepshank" is planted late nowadays, mostly in rather poor or waste ground. After the sandy fields have been plowed, sowing begins, about May 10 to 15. Some superstitions are observed in the planting: for instance, corn should not be sown while the wind is from the east; it should be sown before noon, and when the "moon is filling," that is, when it is on the increase. Also in regard to agriculture, we learn that potatoes and wheat must be planted in the light of the moon, and tomatoes should not be planted while the wind is easterly. Furthermore, watermelon-seed should be sown before sunrise on May 12.

Returning to the cultivation of corn, we encounter an interesting implement known locally as a "suckerin' cane," used during the early season. This is a crooked stick of oak with a natural bend forming a grip, the whole averaging 22 to 26 inches in length (fig. 1). This implement is employed by the men, who go through

¹ See Willoughby, "The Virginia Indians in the Seventeenth Century," *American Anthropologist*, N. S., 1907, vol. 9, no. 1, quoting Beverley, *History of Virginia*, 2d ed., 1722, p. 18.



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the fields pulling out the surplus sprouts in the corn-hills. They rest their weight upon it like a cane, when they bend over and pull out a sprout. The sharp end is used also to poke holes in the hills where other grains of corn are needed to be planted. This is manifestly the old planting-stick surviving in serious use.

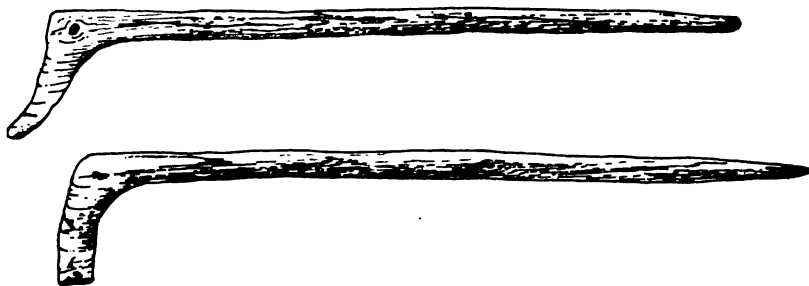


FIG. 1.—"Suckering" canes.

The next operation deserving notice is the "topping" and "stripping" which take place when the kernels have formed sufficiently and the milk will not run when, as a test, the kernel is cut with the finger-nail. The topping consists in cutting off the stalk above the uppermost ear, while stripping refers to cutting off all

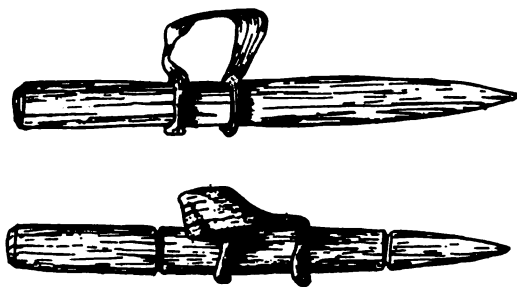


FIG. 2.—Corn-husking pegs.

the leaves. This practice is an old one among the farmers throughout southern Delaware, and locally is attributed to the Indians. The tops and leaves are used as fodder for stock in this region, where little or no grass for hay grows. When the corn is to be harvested, the men enter the fields and husk the ears, throwing them into heaps, which are then gathered in large baskets by

children and helpers. A husking-peg of hard oak, five to six inches long (fig. 2), with a leather finger-loop, is used. This article is practically the same as that found among the Iroquois, Pamunkey, Mohegan, and other Southern tribal remnants. Finally the corn crop is stored in the large characteristic corn-cribs, made of logs (pl. xv), which may possibly preserve some aboriginal constructional features, since the entire corn industry is derived from the Indians, and many of the implements used with it have survived in one form or another.

In the first stage of the preparation of the corn for use, an interesting device for shelling the corn from the cob is found. This consists of a large, hollow log from a gum tree, 29 in. high and 27 in. wide, with walls $1\frac{1}{2}$ in. thick. Its widest part is uppermost, with a row of eleven wooden bars, $1\frac{1}{2}$ in. thick, reaching across the cavity like a grating, a foot from the ground or lower edge. The husked ears of corn are put in the upper cavity and beaten with a pestle made by fastening an iron wedge into a notched staff. The loosened kernels fall through the grating into the lower compartment, from which they are shoveled out through the aperture. One of these old corn-shellers is shown in operation in plate xvi. This apparatus is known to have been used by the Nanticoke from the time of their earliest remembrance. One wonders if it is a strictly aboriginal invention, since nothing like it has been reported elsewhere on the continent. The natives, of course, in preparing small quantities, sometimes shell the corn by grating it with another cob.

Next the usual corn mortar and pestle are used to pound the corn into grits or flour. The mortars of the Nanticoke are evidently of native origin. Nearly every family possesses one. They are all of one type (pl. xxi), tapering toward the base. The hominy mortar is made of gum-wood. The outer surface is shaped with an axe; the cavity is made by drilling a deep hole into the top of the log and putting fire therein, which is replenished until it has burned near enough to the edge. The pestle is the same as the one above described. The kernels of corn are pounded to grits in the mortar, the chaff and hulls being separated by scooping up the



NANTICOKE TYPES

(THE LOWER TWO ARE FULL-FACE AND PROFILE PORTRAITS OF THE SAME WOMAN)

grits in a basket and pouring them again into the mortar from above, or from one basket to another, allowing the wind to blow the waste away. Sieves seem to have been unknown. By repeating the pounding and pouring operation, the corn is ground and cleaned until fit to be used as hominy or for bread. Smaller mortars of the same shape, though some straight-sided ones are found, are employed for pounding coffee and medicinal plants (pl. XXI). In shape these mortars are unlike the plainer ones of the Southern tribes, and they are not found in use among the whites. Some have cavities in the bottom for cracking hickory-nuts.

Following are the dimensions (in inches) of Nanticoke wooden mortars in the Museum of the American Indian:

MATERIAL	HEIGHT	WIDTH AT TOP.	NARROWEST PART	BASE	DEPTH OF CAVITY	THICKNESS OF WALL AT RIM
Gum.....	29	12	7	11½	15	1½
Gum.....	32	16	8	15½	12	1½
Gum.....	14	7½	4	7	8½	½
Locust.....	17	7	4½	7½	4	1
Gum.....	12	6	2	6	6	¾
Gum.....	33	13	4½	13	12	1
Gum.....	34	12	6½	11	18	1½

The stirring paddles used by the Nanticoke when making mush or pone are of two general sizes. The longer ones (fig. 3) are 28

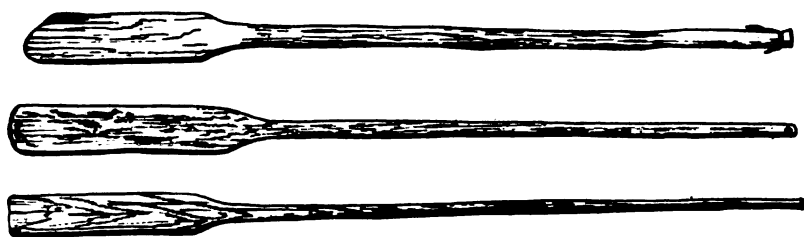


FIG. 3.—Large stirring paddles.

to 30 in. long, with blades 1½ in. wide, and are made of white oak or of yellow pine. The smaller paddles are from 17 to 19 in. long (fig. 4) and are much used nowadays in making butter. Although the stirring paddles are extremely plain, the nearest people whose

paddles they resemble, excepting the remnant of the Powhatan Indians of Virginia, are the Cherokee of North Carolina, whose paddles are identical.

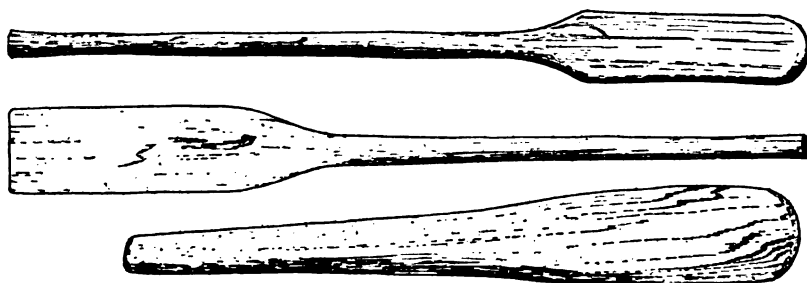


FIG. 4.—Small stirring paddles.

A large, cumbersome, spoon-like ladle, evidently of cypress (fig. 5), was also used for stirring food in a cauldron. An individual spoon obtained from a Nanticoke near the ocean at Lewes, is made of red oak, with a bowl 3 in. wide and a handle 10 in. long. It was used for eating corn and beans.



FIG. 5.—Wooden ladles for stirring.

Some old-fashioned foods of Indian origin have survived. Among these is found the "ash cake"—a disc of corn dough, six inches or so in width, wrapped in large, damp leaves and placed in the ashes of a dying fire. Another food is "johnny-cake" (journey cake), made of corn flour and water mixed to dough and spread upon an oak board which is then tilted obliquely on its side before an open fire until the cake is browned. A very old "johnny-cake" board, 18 in. long, 4 in. wide, and $\frac{3}{4}$ in. thick, is shown in figure 6.



NANTICOKE TYPES

(THE UPPER TWO ARE PORTRAITS OF THE SAME WOMAN)

Johnny-cake was the staple of these Indians in former times, and with roasted or boiled meat and fish constituted the chief diet.

"Pone,"¹ the next important food, consists of corn-meal salted to taste, mixed with water, placed in a vessel, and cooked in an oven over night. This makes a nourishing but rather heavy loaf, which is very popular when eaten with cane molasses.

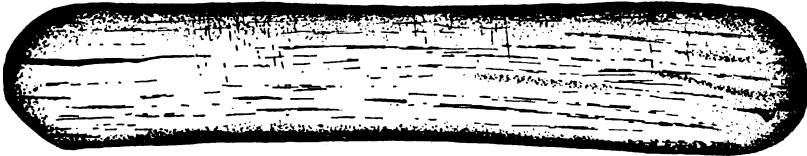


FIG. 6.—Johnny-cake board.

According to another native recipe meat is mixed with hominy and boiled in the form of a stew. The meat of all kinds of wild game is stewed or fried. Muskrats are made into a stew, as are also raccoons and opossums.

FISHING AND HUNTING

Indian river abounds in fine, edible fish, many of which come in as they enter Delaware bay to ascend to their spawning waters. Among the chief fish are shad, herring, drum, perch, and latterly carp. Fishing, indeed, forms one of the leading activities of the Nanticoke, and is followed as a business by some of them. Among the devices for taking fish, some are probably of aboriginal origin while others have been modified by modern usage.

The Nanticoke use the eel-pot, so characteristic of all the tribes south of the St Lawrence along the Atlantic coast, making it of pine and of oak splints from half an inch to an inch wide in the simple twill weave, with an indented bottom to serve as an entrance, the inward projecting standards preventing eels or other fish, having once entered, from passing out again. The eel-pots are between 18 and 26 in. in length, about 9 in. wide at the bottom, and 5 in. at the top. Several specimens of pine and of oak splints are shown in plate XIX. The opening at the top is here

¹ This term is probably derived from old Nanticoke *a'pa'n*, "bread" (Canadian dialect).

generally closed with a wooden plug. The eel-pot is sunk with stones on the bottom along the shore, or is put at the mouth of a fyke, to be described later.

Fish-nets are found in nearly every family of the tribe living within a mile or so of the river. They are now made of the cord of

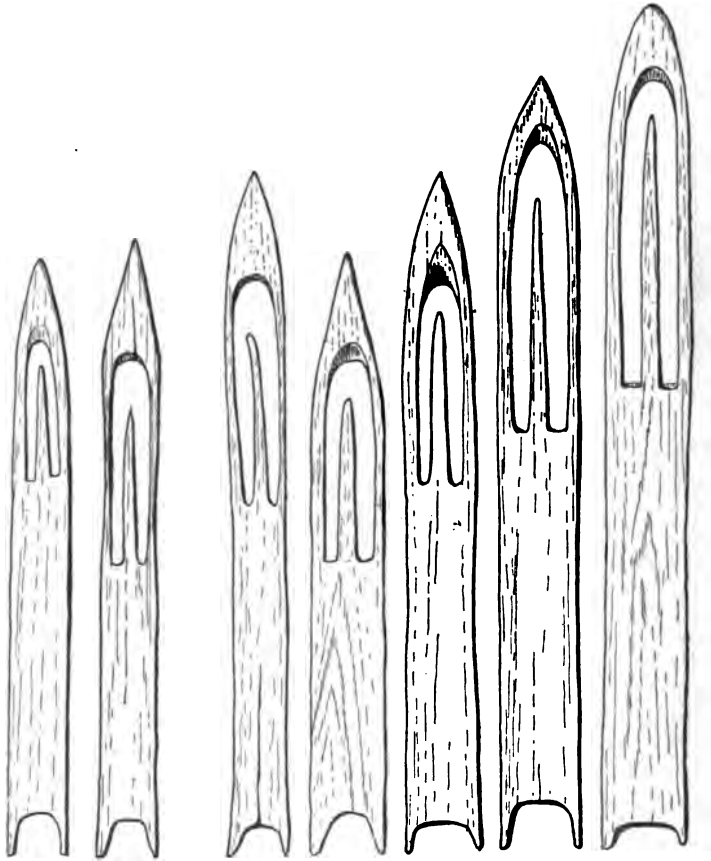


FIG. 7.—Netting-needles. The first two examples are for making herring nets, the others for making nets for sturgeon, drum, and shad.

commerce. The netting-needles and mesh-sticks are of the form shown in figure 7. The needles range from 6 to 9 in. in length, and from $\frac{1}{2}$ to 1 in. in width. They are all of oak, with the tongue from $\frac{1}{2}$ to 2 in. long. The mesh-blocks, of oak or pine (fig. 8),



NANTICOKE TYPES

(FULL-FACES AND PROFILES. THE UPPER PORTRAITS ARE THOSE OF THE GRANDDAUGHTER OF THE WOMAN ILLUSTRATED AT THE TOP OF PLATE VIII)

range from 1 in. to 3 in. wide, and are generally $3\frac{1}{2}$ to 4 inches long and $\frac{1}{2}$ inch thick. The smaller blocks are for perch and herring nets, and the larger for carp, shad, drum, and the like. The net-knot, or becket, is made by taking a turn of the cord under the mesh-block and up to the top side where it is held fast by the thumb pressing the block; then a loop is thrown to the left, the needle passed through the mesh-opening just above, enclosing the cords, and the knot drawn taut.

It should be noted that the netting-needles made by the Nanticoke, strange as it may seem, differ in one respect from those made by the neighboring white and black people. Among the latter, the open space and tongue of the needle are somewhat longer. This difference I have tested by observing a number of specimens both from whites and negroes in southern Delaware. Incidentally, the shape and proportions of the Nanticoke needles are practically identical with those observed among the northern Atlantic and Canadian Algonkin.

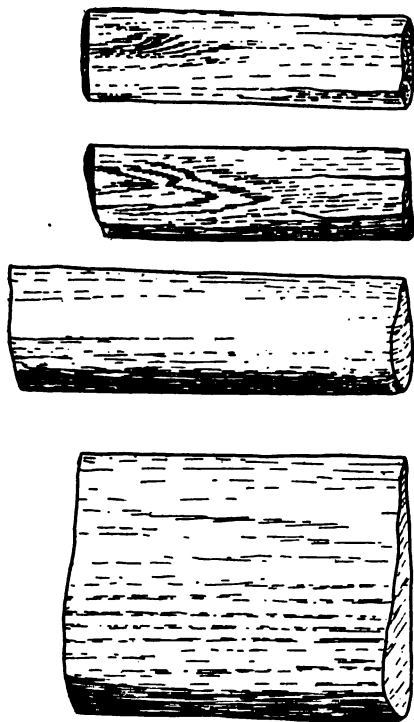


FIG. 8.—Measuring blocks for making nets.

The nets are used for dragging across the channel of the river, as set or gill nets, and for fykes. A party of Nanticoke take one of the nets in a boat and row across Indian river at one of its narrower points, having left a man on shore with a long rope attached to the net. They then put the net in the water and row back to the shore whence they started. Next the man left on shore below, and those pulling farther along, gradually haul the net, like a narrowing

bag, until it is drawn out upon a sandy beach between the two parties, where all the fish that have been drawn into it are secured. Plate XVIII shows a party engaged in seining herring by this method in April, 1912.

For fishing in the river a fyke is commonly employed. This is made on the same plan as the basketwork eel-trap, the fish entering a funnel-shaped enclosure of network, and being prevented from getting out by the difficulty of finding their way between the strings which they passed in entering. The fyke generally has three hoops

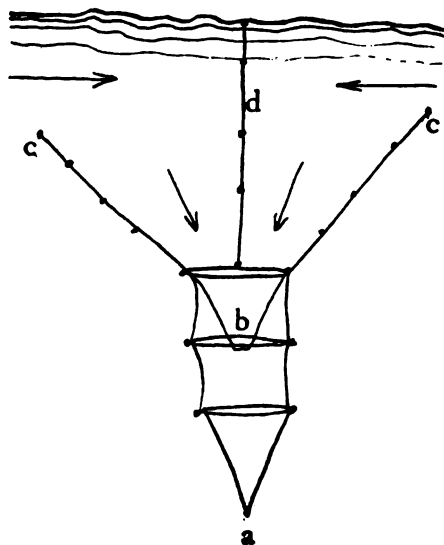


FIG. 9.—Fyke set along shore, looking downward.

of wood which form the tapering enclosure, and two wings of net, branching out on each side, with a long central line of net running from the mouth of the fyke to the shore. The fykes vary in size. The smaller have hoops 29 to 32 in. in diameter, an enclosure not more than 6 or 8 ft. long, with wings about 15 ft. in length. The larger fykes have hoops 5 or 6 ft. in diameter, an enclosure of 10 to 15 ft., with other dimensions in proportion.

The floats and sinkers for the wings and runner of the fyke are the same as for the draw-nets. Figure 9 shows how the fyke is set facing the shore, with its wings and runner to guide the fish, which move along close to the shore, up or down stream, into the enclosure.

The fyke and its runners are held in place by poles driven into the sand of the river. The arrows indicate the direction in which the fish swim; *a* shows the rear opening of the fyke, which is closed by tying, the fishermen going out, in boats, with open-bottom baskets, lifting up and opening the fyke, and transferring



NANTICOKE CHILDREN

the captured fish to the baskets; *b* is the tapering entrance, *c, c* the wings, and *d* the runner. The distance from the shore varies. Fykes of heavier netting are used for terrapins, the collection in the Museum of the American Indian containing a terrapin fyke 8 ft. long, of heavy cord with an inch mesh. The lower left-hand figure of plate XVIII shows a scene along Indian river in February, 1912, with a fyke, indicated by the poles, frozen beneath the ice.

From one of the old men of this community I obtained a fish-hook with artificial bait and hand-line which he had made for himself so cleverly that it seems worthy of treatment as a product of native ingenuity. The whole device, except the hook itself, is of home make (fig. 10). From a piece of flat bone he has whittled the semblance of a small bait fish. A wire leader connects this, the hook, and the line. The float is of pine, plummet-shaped, and the line is wound on a corncob reel. This device the maker was using with great success in fishing for carp. He claimed to have thought of this arrangement by himself, the blind cupidity of the fish when hungry having suggested the artificial bait.

As adjuncts to the nets, there



FIG. 10.—Fish-hook with artificial bait.

are wooden floats made of pine, in the several shapes illustrated (fig. 11, *a*, *c*), from 2 to 5 in. long and 2 in. wide. Stones are used for sinkers whenever they can be obtained in this sandy region; otherwise small bags of sand are ingeniously substituted. For hand-line fishing the floats are neater and somewhat pear-shaped (fig. 11, *b*).

While agriculture and fishing were so prominent in the life of the Nanticoke, hunting seems to have been a minor activity in

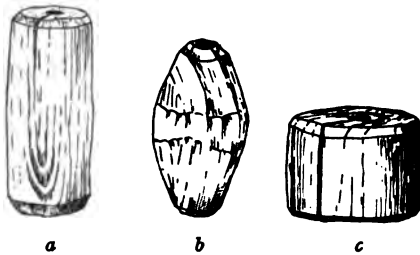


FIG. 11.—Net floats.

later years at least. In the extensive cypress swamp west of Millsboro, at the head of Indian river, game of various kinds was formerly abundant. Bears, deer (until about 25 years ago), raccoons, opossums, rabbits, quail, and squirrels were hunted. Strangely

enough, though probably from climatic causes, the woodchuck and the partridge (*Bonasa umbellus*) are missing from this locality. The only vestiges of native hunting devices are the degenerated bows and

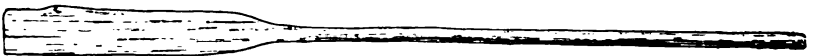


FIG. 12.—Paddle for fishing boat.

arrows, and two or three kinds of snares. The bows and arrows are now only rarely found among the boys, who use them in their play or for chasing rabbits and squirrels. In the memory of some

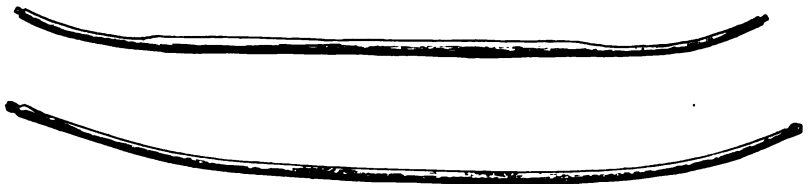


FIG. 13.—Bows.

of the older men, however, they were regularly carried by children who went hunting in the woods with their fathers, who of course

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NANTICOKE TYPES. FAMILY GROUP AND GROUPS OF SCHOOL CHILDREN
(NOTE THE POSITION OF REST ASSUMED BY THE BOY IN THE LOWER LEFT-HAND GROUP)

were armed with guns. The only bows available now are the small ones, $2\frac{1}{2}$ to 3 ft. long, made of white cedar or oak—plain staves sometimes squared in section (fig. 13). The arrows, 17 in. long, are more interesting because they exhibit features that resemble those of the arrows of the Southeastern tribes. Here, for instance, a cone of tin forms the head (fig. 14), for shooting small creatures and even fish.

A common device for trapping rabbits and opossums is a box-trap made of a hollowed gum-log. From a single hollow log, eight or nine sections may be cut off to make as many traps. The back is closed with a piece of board, the front opening is provided with a drop door, as shown in the illustration (fig. 15), and a trigger attachment with dropping apparatus. An ordinary box is often used, but it is interesting to note that in the Nanticoke device there are found some features which differ from those of the common rabbit box-trap of the country boy. Some of these may be traced to local Indian origin.

Several choking or spring snares (fig. 16) are also interesting. The illustrations show all needed details. A slip-noose is attached to a bent sapling or pole. In one variety the trigger-stick, attached by the middle to the string, is caught vertically in the crotch of a stick driven into the ground, where it is held by the bait-stick. In the other, the trigger holds in the notches by the pull of the string, the moving of the bait-stick freeing it from the notch. In both of them the loop is commonly supported upon three or four small forks, so that it rests in front of the bait, just beneath where the animal's head comes.



FIG. 14.—
Arrowhead.

OTHER INDUSTRIES

BASKETRY

The basket-making of the Nanticoke is the survival of an old art, the methods and materials, as well as some of the present-day types, representing the more utilitarian side of the original industry.

The Nanticoke nowadays make only the plain splint baskets for household and farm use, in a variety of sizes but of only one style. These are of the common, circular-bottomed twill (over-one-under-one) weave, and range in capacity from about a quart to approximately a bushel. In the matter of the rims, the baskets show an interesting and significant peculiarity which will be figured later, though in all other respects their baskets would pass without comment in any of the Eastern Atlantic Algonkin tribes.

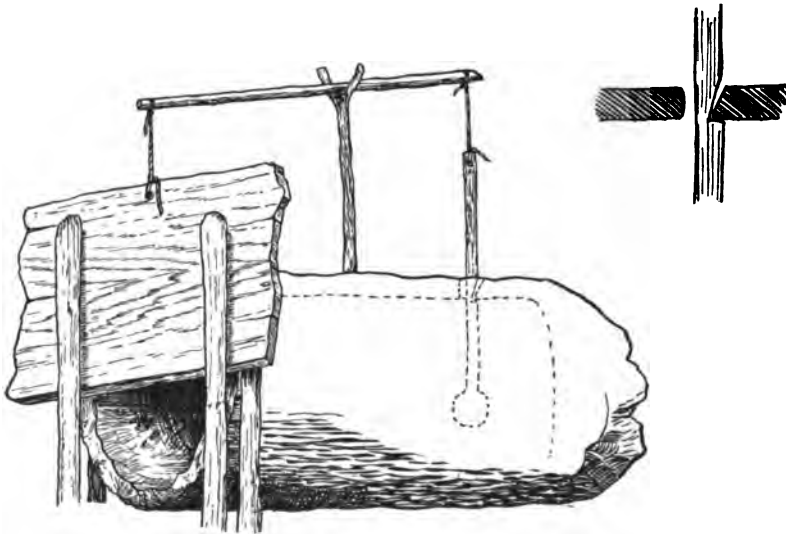


FIG. 15.—Gum-log rabbit trap.

The materials used are yellow pine (*Pinus echinata*) and white oak (*Quercus alba*). The trees are felled, and the splints loosened at one end of the log and pulled off by sheer strength without previous pounding or other preparation. With a knife the splints are next smoothed and thinned to the desired proportions, when all is ready for the weaving.

The bottoms are of two kinds, round and rectangular. In the former, the weaver begins with from twelve to sixteen standards, arranging them like the spokes of a wheel and weaving the splint filling spirally over-one-under-one; this is continued up the sides



SCENES ON INDIAN RIVER, DELAWARE

carrying or storing small articles, eggs, fancy-work, tools, etc. They average 11 to 12 in. high and 7 in. wide. Occasionally some attempt at decoration is made by dyeing one or two woof splints a dark color with pokeberry or other native dye.

Until a few years ago baskets woven of rushes were known.

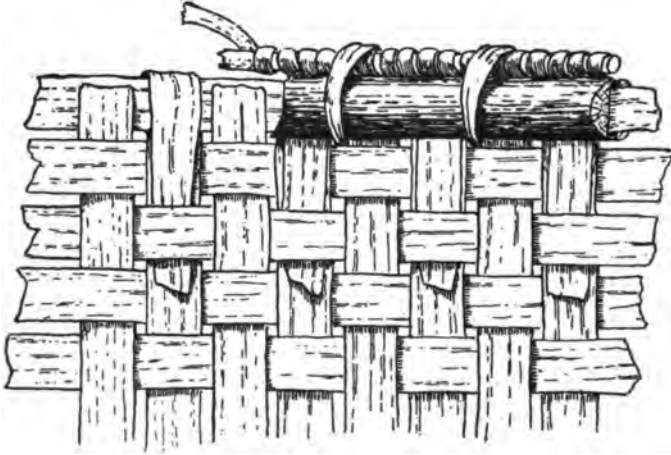


FIG. 18.—Detail of basket rim.

A rather interesting though degenerated fancy basket, obtained from one of the women of this community and said to be of a kind more common in times past, is constructed of corn-husks. Lengths of these have been braided and coiled spirally to form bottom and sides, the attachment sewn being of cotton. Around the sides are sewn loops of corn-husk to give an ornamental effect, a braided husk handle completing the receptacle. It is about 6 in. wide and 3 in. high (pl. XIX).

DYES

The following substances are used for coloring basket materials:

Poplar bark, boiled, gives a dark-brown color.

Crushed chokecherries give a black or blue color.

Pokeberry juice gives a pink color.

Wild indigo plant gives a dark-blue color.

Red-oak bark, boiled, produces a light-brown color.

Walnut hulls are boiled to produce a brownish dye.

Myrtle berries give various shades of purple, red, and dark brown.

MISCELLANEOUS

Gourds are commonly raised among the Nanticoke, the bodies being used for drinking vessels or as receptacles for such things as seeds, salt, household odds-and-ends, work materials, and, in former times, food. Some examples are illustrated in figure 19. By cutting off the necks, different depths and shapes are obtained. Sometimes the rims were scalloped for ornament. Gourds in appearance

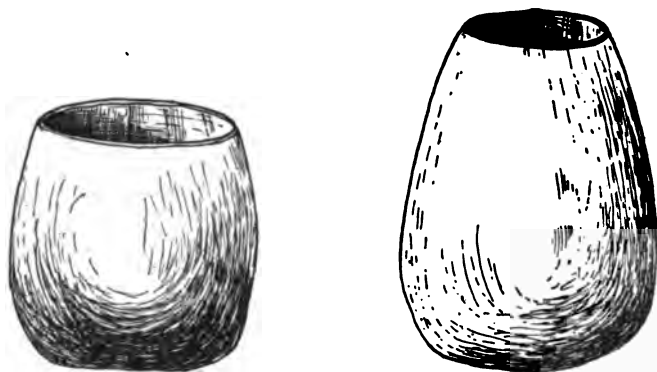


FIG. 19.—Gourd receptacles.

show a close resemblance to pottery, which they are said to have supplemented in use. Small gourds, with an aperture in one side, are commonly hung in trees as nesting places for bluebirds, martins, and wrens. Children use small gourds dried with the seeds inside for rattles.

Dug-out canoes have been obsolete for almost fifty years. Mr Clark says that those he remembers were pointed at both ends, were made of pine, and were about 18 ft. in length. He states, as might be expected, that they were made by alternately adzing and charring the log. The canoe was poled, and paddled with a long paddle said to have been similar to the kind used with boats today (fig. 12). Canoes are called "pirogues."

An interesting method of hanging meat, especially salted pork, is without exception employed by all these people. In the meat-house of every farm are cross-poles supporting hams and other meat. The feature of note, however, is that the meat is always hung by a



NANTICOKE HOMESTEAD, AND CORN MORTARS IN USE

withe of Adam's needle, or yucca, not by rope or cord. The use of these fibers is evidently a survival of an aboriginal practice.

LOCAL CUSTOMS

THE TURKEY SHOOT

The only Indian custom surviving in the community today for which we can find a parallel in the historical accounts of the region, is one known as the Turkey Shoot, or "Shooting Match." In autumn, generally in November, it is customary among the Nanticoke to hold gatherings at different farms where the women sew and gossip and prepare something to eat, while the men, armed with shotguns, repair to a spot in the field near the house. There a piece of stick is inserted in the ground and a line drawn about one hundred paces away. The man at whose home the shoot has been assembled provides discs of paper upon which any of the marksmen may have their initials written by paying a fee of five cents, which entitles him to a shot at the paper. Then a certain chicken or a turkey is indicated as the one to be shot for, those who wish to purchase a shot make payment and receive their slips, and then each takes a shot at his own slip which, at his turn, is fastened to the stick. The man who has made the best shot, as indicated by his slip, wins the bird. Years ago it was the custom to try to shoot the head off the bird. These "shoots" are very much in favor in the community, serving as social gatherings for families living far apart. The ancient Nanticoke sport is thus described by Campanius: "The sachem causes a turkey to be hung up in the air, of which the bowels being taken out and the belly filled with money, he who shoots the bird down gets the money that is within it."¹

WEDDING SERENADE

Among other rural customs in the community the Wedding Serenade is well known. On the night of a marriage a crowd of men and boys gather at the house of the wedding and serenade the bridal pair with singing, and an improvised orchestra of cow-bells,

¹ Francis Vincent, *A History of the State of Delaware*, vol. 1, p. 71 (quoting Campanius, p. 128), Phila., 1870.

horns, and the like. If the groom does not invite them in and treat them to food, they ride him round the house on a fence-rail.

GAMES

Besides the ordinary country games of white children, the Nanticoke play some group games which may have an element or two of individuality. One is "Bear-in-the-ring" (see pl. xx). Within a circle of boys holding hands stands another boy who is the "bear." His object is to break through the ring and escape. Should he succeed, the one to catch him has the privilege of being the "bear" next time. Another game is "Toad-in-the-meadow."

Cat's-cradles are generally well-known among these people. The figure known among the Southern Indians as "crowfoot" is common here also as "crow's feet." Another is Job's Coffin and is regarded as symbolic of the constellation of that name. String-figures in general among the Nanticoke, it is interesting to note, are regarded as representations of star groups.

FOLKLORE

MEDICINE PRACTICES

The following amulets and herb cures were learned of among these people. Knowledge of them seems to be quite generally distributed among both sexes; the idea prevails, however, that there are some people who are more gifted in their ministrations than others. For instance, there are those who have the gift of removing sickness by their will. The seventh son or daughter is thought to possess some such magic power and the knowledge of useful medicines.¹ Then others there are who have the power to cast "spells" on people.

A string or necklace of deerskin will prevent the wearer from getting whooping-cough.

A necklace of kernels from an ear of red corn will protect the wearer from nose-bleed. (See pl. xvii.)

A dried spider wrapped in cloth and put in a thimble worn round the neck will also prevent nose-bleed.

¹ A belief almost universal among the Eastern Indians as well as among the whites.



NANTICOKE CORN-CRIBS



FINER BASKETS OF AN EARLIER PERIOD

For curing a lame person, secure a worm, put it in a bottle, and hang the bottle up until the worm decays, then rub the matter upon the lame limbs.

To prevent fevers during summer, it is said, chew the petals of the first hepatica flower which you see in the spring. The hepatica plant (*Hepatica triloba*) is called "chills-and-fever plant."

Horsemint (*Cunila origanoides*) is brewed for colds.

Calamus root, "muskrat root"¹ (*Acorus calamus*) is used for colic and for babies with colds. A tea is usually made. Or a piece of root may be carried about to be chewed. Mothers chew it and blow into infants' mouths to stop pain or to sooth them to sleep.

Mullein (*Verbascum thapsus*) leaves make an excellent poultice for fevers. Roll them out, dip them in vinegar, wring them out and bind them to the back of the neck, forehead, wrists, and soles of the feet. Keep wet with vinegar.

Wild indigo plant (*Baptisia tinctoria*) and poplar (*Populus deltoidea*) brewed together make a good lotion for sprains.

Pellets of pine tar (*Pinus echinata*) make a fine cathartic and are good for lame back.

An eel-skin is worn around parts affected with rheumatism.

Certain persons having the power can charm away warts by their spittle.

Chills likewise can be "promised"² away by a healer or witch.

Cuts are healed by covering them with cobwebs. In such a case a silver dollar is also bound over the cut. Soot likewise is used to heal cuts.

Blow tobacco smoke in the sufferer's ear to relieve earache.³

For a pain in the stomach, blow tobacco smoke in a cup of water and drink it.

Tobacco smoke blown in the baby's mouth will relieve its pain.

Prickly-pear (*Opuntia opuntia*) rubbed on warts will remove them. Inflammation may also be drawn from stings or bites by applying a split prickly-pear joint.

¹ Incidentally similar to the Wabanaki name.

² Made to leave by promising the subject that they will go.

³ Also a Malecite remedy, and known to the Mohegan.

For chicken-pox, place the afflicted child in front of a chicken-house door and let the chickens fly out over him.

For sore throat, place the bent thumb in the patient's mouth and press his jaws as far apart as possible for five minutes.

For nose-bleed, place a cobweb up the nostril. Also drop a bunch of brass keys down the back.

A tea brewed of skunk cabbage leaves (*Spathyema foetida*) will cure a cold.

To cure chills, take a stick and cut as many notches in it as you have had chills. Then go to the stream that flows to the east throughout its course, throw the stick into the water over the left shoulder, and walk away. The chills will leave in a day or two.

To cure warts: Pick up a stone at a cross-roads and rub on the wart as you walk along. Throw it over your left shoulder and walk straight to your destination without once looking back. The wart will disappear in three or four days.

To cure backache: Wear the skin of a blacksnake round the waist. The snake-skin must be removed whole from the living snake. (One old man is said to have obtained a fresh skin every spring and to have worn one of these constantly.)

A woman who marries but does not change her name (marries a man of the same name) can steal bread from her neighbors and give it to children to cure whooping-cough. She may even ask a friend to leave some bread where she can take it without being seen. A variant of this says that it is the bread stolen from a woman who does not change her name that will effect the cure.

For whooping-cough, take as many roaches as there are children afflicted and name each after one of them. Then each child puts the roach named after him into a bottle and corks it tightly. When the roach dies the disease will leave the child. But be sure that the patient's bowels are kept open or the charm may react and kill him.

The following verse of Scripture will cure nose-bleed; but it can be told to or said over only a person of the opposite sex. (Ezekiel, 16:6.) "When I passed by thee I saw thee polluted in thy blood and I said unto thee Live! and thou didst live in thy blood: yea thou didst live in thine own blood."



LARGE FLAT BASKET



NANTICOKE CORN MORTAR AND "SHELLING MORTAR" IN USE

Cure for croup: Stand the child against the door-jamb and mark its height. When the child outgrows the mark it will be cured.

Cure for frost bite: Bind an animal's bladder on the affected part.

Several plants have local folk names, although no particular efficacy is ascribed to them. Milkweed (*Asclepias tuberosa*) is called "frog's milk." Wild gooseberries (*Grossularia* sp.) are called "Devil's berry" because when they ripen one at a time and fall off during the night, they say that the Devil picks them off.

Sassafras (*Sassafras sassafras*), pronounced locally as "*sarsa-fack*," is made into a tea and drunk in spring to ward off fever and ague, and to cool the blood. It is thought that fever and ague are brought on by going barefoot or swimming in the river too early in the spring. The ailment is very common in this region.

The leaves of a plant called "fish weed" are chewed for worm troubles. Snake-root (*Aristolochia serpentaria*) is steeped and given for the same ailment.¹

Pipsissewa (*Chimaphila maculata*) is steeped and drunk by the cupful to cure ague.

The leaves and stems of a plant called "King Cole oil weed" are good for poultices.

Balsam plant (*Impatiens biflora*) is steeped and made into a poultice for burns.

Burdock (*Arctium minus*). Leaves steeped and applied to boils.

Arrowroot (*Peltandra virginica*) is grated and fed to babies. It resembles corn-starch when mixed with milk.

Pennyroyal (*Hedeoma pulegioides*) and Tansy (*Tanacetum vulgare*) are both used as sudorifics. Pennyroyal is also considered an excellent kidney and liver medicine.

Myrtle (*Leiophyllum buxifolium*) berries are made into wine and tonic.

Wild Thyme (*Thymus serpyllum*) and Boneset (*Eupatorium perfoliatum*) steeped together are drunk for chills and fever.

For convenience of reference the Nanticoke-Moor remedial plants are presented in the following form, local names being marked with an asterisk.

¹ Snakeroot is also a Penobscot and Mohegan remedy.

Hepatica (<i>Hepatica triloba</i>)	Fever and chills
Horsemint (<i>Cunila origanoides</i>)	Colds
Calamus (<i>Acorus calamus</i>)	Colic
Mullein (<i>Verbascum thapsus</i>)	Poultices
Wild Indigo (<i>Baptisia tinctoria</i>)	} Sprains
Poplar (<i>Populus deltoidea</i>)	
Pine (tar) (<i>Pinus echinata</i>)	Cathartic
Prickly-pear (<i>Opuntia opuntia</i>)	Cure warts, frost bite
Skunk Cabbage (<i>Spathyema foetida</i>)	Colds
Sassafras (<i>Sassafras sassafras</i>)	Fever and ague
Milk-weed (<i>Asclepias tuberosa</i>)	— "Frog's milk"
Wild Gooseberry (<i>Grossularia</i> sp.)	— "Devil's berry"
*Fish Weed (sp. ?)	Cure worms
Pipsissewa (<i>Chimaphila maculata</i>)	Ague
*King Cole Oil Weed (?)	Poultices
Balsam Plant (<i>Impatiens biflora</i>)	Poultice for burns
Snakeroot (<i>Aristolochia serpentaria</i>)	Cure worms
Burdock (<i>Arctium minus</i>)	Boils.
Arrowroot (<i>Peltandra virginica</i>)	Baby food
Pennyroyal (<i>Hedeoma pulegioides</i>)	{ Kidney, liver sudorific
Tansy (<i>Tanacetum vulgare</i>)	
Myrtle (<i>Leiophyllum buxifolium</i>)	} Tonic wine
Thyme (<i>Thymus serpyllum</i>)	
Boneset (<i>Eupatorium perfoliatum</i>)	Fever and chills

WEATHER SIGNS

Killdeer plovers ("kildee") flocking and calling in the morning when it is calm are a sign of coming wind.

Killdeer plovers as well as some other birds are thought to speak certain words. The killdeer says, "Wind blow, wind blow!" This is another sure sign of the coming of wind.

The flight of wild geese is also regarded as a sign of wind approaching.

If the chickens stay out in the rain and continue feeding you may expect it to rain for a long time. They know that it is going



FISH HAWK'S NEST, PROTECTED BY TABOO



NANTICOKE BOY WEARING NECKLACE OF RED-CORN
KERNELS AS A CHARM AGAINST NOSEBLEED

to rain and want to get something to eat before they go to shelter. If they run for shelter when it begins to rain, the rain will not last very long. They know they can feed later on, so do not stay out in it.

When you hear the surf (the ocean is nine or ten miles to the eastward) you may expect rain the following day. (This denotes an east wind.)

When crows or blackbirds flock in a field it is going to rain.

When hogs become restless, grunt, and pick up sticks, cobs, etc., as though they are going to make a nest or a bed, a storm is coming.

When it rains and the sun is shining it will rain again the next day.

Where the ends of the Milky Way appear to rest on the horizon is the direction from which the wind will blow the next day.¹

The sun-dog is a sure sign of a coming storm.

If you kill a snake and throw it into a tree, it is a sign that it will rain the next day if the carcass hangs in the branches, but if it falls through the branches the next day will be clear.

MISCELLANEOUS SIGNS, OMENS, AND BELIEFS

If you mock a mourning dove, some time he will burn you.²

The cooing of the turtle-dove indicates the direction where your lover is.³

The whippoorwill's first cry in spring is the sign that it is time to plant corn.

A black animal seen crossing one's path at the beginning of any venture is a sign of bad luck. Turn back and choose another time.⁴

A falling star is the sign of disappointment.

When the new moon is first seen, take out your pocketbook and shake it toward the moon for good luck.

¹ Known among the Indians as far as the Montagnais of Labrador.

² Resembles the Wabanaki belief about mocking the screech owl.

³ Known among the Muskogians and Yuchi.

⁴ Resembles an Ojibway and Wabanaki belief.

The Jack-o'-my-lantern is thought to be a kind of spirit which is likely to follow people and cause misfortune. To prevent this, people turn their pockets inside out when they see one. An informant claims to have seen a number issuing one night from the stump of a dead tree.

Ringin in the ears is known as "death bells" and announces the death of some friend or relative.

On New Year's day it is the custom for men to go visiting, the first to come to the house receiving fifty cents. But for a woman to come to a house on this day is an ill omen.

Like storks in Europe, fish-hawks (*Pandion haleætus carolinensis*) are venerated by the Nanticoke. It is a sin to kill them or to disturb their nests. The fish-hawks respond by building their nests near habitations, generally in open fields among the limbs of a dead tree, sometimes as low as fifteen feet from the ground, and returning to them year after year. These huge nests are fairly common and become the abode of many small birds as well. (See pl. XVII.)

Buzzards also are never molested.

If a scorpion lizard (locally "scorpion," *Sceloporus undulatus*) gets on a person and manages to run completely round the body, the person will die.

To win the girl with whom you are in love: Cork an empty bottle and take it to a stream that flows to the east through its entire course. Tie a string round the neck of the bottle and fasten the other end to a limb or a bush overhanging the stream. Then put the bottle on the water so that the stream pulls it along until the string becomes taut. Draw with a stick in the sand a picture of the girl. Anything will do provided it be your best and your mind is intent upon it so that you really mean it to represent her the best you can. Then go away and leave it. As the string holds the bottle so she will cling to you. But if the string breaks, then she will break away from you.

To win the one with whom you are in love: Go to a well at noon on the first of May and hold a mirror so as to get the reflection of the water below. In the mirror you will see the image of the girl



NANTICOKE FISHING SCENES ON INDIAN RIVER
(HAULING HERRING NET, FYKE SET IN ICE, AND EEL-POTS ON SHORE OF RIVER)

or the boy you are going to marry. If you are not to marry at all you will see a coffin.

Two of the same sex are required in performing the following love charm: Boil an egg hard and let it stay in the water a day. Then each breaks it, takes out the yolk, and fills with salt the space left by its removal. Eat the white of the egg and the salt without water and without saying a word. Walk out of the room backward, go upstairs backward, and get in bed backward. In a dream the girl or the boy you are to marry will come and bring you a drink of water. During all this time and until morning of the following day not a word must be spoken.

The Midnight Supper: Only two persons of the same sex can perform this charm. At midnight, with the lights turned very dim, two people of the same sex sit at the opposite ends of a table and eat ash-cake [see page 14]. If you are going to marry, the form of the person you will wed will appear to come to the door and walk straight across the room. If you are not to be married, a coffin will come and rest alongside of you.

To cause a person's death: Get a piece of his hair and bore a hole into a pine tree when the sap is down; that is, before March 20. (Any time between September 20 and March 20 will do. The sap begins to run up about March 20.) Put the hair in the hole and plug it up. The sap will come up and the person whose hair has been placed there will die within a year.

If a hen crows it is a sign of bad luck and it should be killed.

A rooster crowing at the door denotes a visitor.

When a turtle dove is heard mourning, sit down and take off your shoe, and you will find a hair in it the color of your future wife's hair.

The small eggs often laid by hens are called "latter eggs." They denote that the hen is through laying for the season.

To hand a person a closed knife will bring bad luck. The knife should be opened.

When a child's umbilical cord is severed, it should be disposed of by burning, lest it bring bad luck.¹

¹ Incidentally similar to Penobscot.

Reptile Lore.—The red-headed skink (*Eumeces*) is called "woods bitch" and is thought to be poisonous. The male fence lizard (*Sceloporus undulatus*) is called "scorpion" and is thought to be poisonous because it has a blue throat, while the female, which has no blue on the throat, is called "lizard" and is not considered poisonous. Children capture these lizards by means of a noose of long, tough grass, called "lizard grass," and play with them as though they were little horses. They say that the lizard is not afraid of "lizard grass" and will permit himself to be noosed with it. Salamanders are all considered to be full of venom and are thought frequently to cause the death of hogs who have eaten them in the woods. Cats are also said to eat lizards in the spring and to become very thin as a result; they are then given a quantity of fat to eat, which causes them to get relief from the poison. The water snake (*Tropidonotus*), the hog-nosed snake (*Heterodon*), known locally as the "bastard hornet snake" (*bastard*, "not real"; *hornet*, "horned": "false horned snake," in the local dialect), the "field wiper" (field viper), a general name for field snakes, are all erroneously considered venomous. The black racer (*Bascanion*) is the only snake known correctly to be harmless.

Local snake-lore asserts that the "field wiper" bites itself and dies of its own poison; that the copperhead emits a smell like cucumbers; that a blacksnake-skin worn round the waist will cure rheumatism; that there exists a hoop snake which can take its tail in its mouth and roll like a hoop; that the blacksnake can suck a cow's udder; that if a dead blacksnake is hung upon a tree it will rain soon, perhaps "before you get home"; that the first thunder in spring awakens the snakes from their winter sleep, and that when a snake is killed its mate comes to seek the remains.

ARCHEOLOGY AND LOCAL TRADITION

In Indian River Hundred, which lies on the northern shore of Indian river, the Nanticoke point out a number of archeological sites of which they have knowledge from their old people. From Millsboro eastward, following the shore, are almost continuous vestiges of camp-sites which lie up on the sandy banks of the river. At



NANTICOKE EEL-POTS
(THE SPECIMEN AT THE LEFT IS MADE OF WHITE OAK, THE OTHER OF PINE)



NANTICOKE HAND BASKETS AND CORNHUSK BASKET

Millsboro are pointed out the remains of pits in the sandy hillside just above the ponds at the edge of the village. These pits are said to have been "wigwam pits." Without discussing this claim, one finds the village-sites nearer to the Indian settlement about six miles from Millsboro, close to a spot known locally as "Puddle Hole," much more interesting. Here quantities of arrowheads, hammerstones, lanceheads, knives, steatite objects, and quantities of a fine, stamped, pottery-ware are found upon the sandy surface of the soil. From this spot, beginning a few hundred yards and extending a mile or so eastward are remains of several shell-heaps, the shells widely scattered over the surface, though not extending to any depth. These shell deposits, always near the bank, are of the shallowest sort, the soil being visible among the shells even where the latter are most abundant. Occasional artifacts are found in the midst of these spaces. The Indians say that the ancient people came to these places to have their oyster feasts. The bank has been washed away very much by the action of the river. In the memory of Mr Clark, one point in particular, where his grandmother's house stood, has been washed back more than fifty feet. Probably the camp-sites along the shore have suffered much from this cause.

Another more interesting site is a low mound situated about a mile and a half from the river, immediately bordering the road which leads to Georgetown, Delaware, fourteen miles away. This mound I estimated to be about 15 feet high and 40 paces in diameter. It is composed entirely of sand and is fairly discernible, though Mr Clark says that in his lifetime and that of his father it has worn down at least five feet. The mound now has upon it a growth of sturdy yellow pines. Mr Clark says that his father learned from the elders of the community, many years ago, that the mound was a repository for the dead in the days of the Indians. We might presume that this mound was the site of one of the mortuary houses of the Nanticoke. In excavating a pit near the center of the mound with Mr Clark, we came upon fragments of very old red brick and green-glass bottles which are said to have been sold with rum to the Indians by the early traders.

TALES

For a rather large community there seems to be a dearth of tales having any local distinctiveness or dealing with the animal kingdom. The few rather colorless stories which repeated inquiry brought out are the following, some of which are widespread among both whites and negroes.

RABBIT AND FOX RAISE A CROP

One time a Rabbit and a Fox made arrangements to become partners in raising a crop. They got a piece of ground and set out to raise turnips. The Fox said he would take all that was above the ground for his share of the crop, and the Rabbit could have what was underneath the ground for his. So that year the Fox got only the turnip-tops, while the Rabbit got the turnips. Next year they entered into partnership again, and the Fox said that this time he would again have first choice. So he chose what grew beneath the ground for his share, and the Rabbit agreed to take what grew above. Then they planted their crop, and this time it was cabbage. When the crop was gathered, the Rabbit got all the best again and the Fox got nothing again. This is how he got fooled.

ORIGIN OF DEAD WOOD

One time Crane went down to the river to catch eels. When he got one, he swallowed it alive, but it came right through him and came out his other end. He caught the eel again, and he did the same, with the same result. And again. Then he backed up against a dead stump and swallowed him again, saying, "Now you devil, I've got the dead-wood on you." And the eel could not get through. That is the way, they say, dead wood first started.

THE WREN OUTWITS THE EAGLE

The Eagle was recognized as king of the birds, because he could fly higher than any others. But one time the little Wren said that he could go even higher than the Eagle. So they challenged him to prove it, and they began flying upward. Then the Wren perched himself upon the Eagle's back and stayed there until the Eagle



NANTICOKE CHILDREN PLAYING "BEAR-IN-RING"



NANTICOKE FISH AND CORN BASKETS

had flown as high as he was able. When they came down again the Wren declared that he had been higher than the Eagle, for as high as the eagle had gone, he had all the time been above him.

THE WONDERFUL HUNTER

There was once an old man and his wife who lived alone in the woods. One time they were all out of provisions, and he had only one bullet and one charge of powder for his gun. So he went hunting to see what luck he would have. Pretty soon, as he was going along, he saw a deer on his right. At his left, all in line upon the branch of a tree, he saw seven wild turkeys. At the same time he espied a rabbit directly in front of him, and a covey of quail behind him. So he took aim and shot his one bullet into the branch upon which the turkeys were sitting, splitting it, so that when it sprang together the seven turkeys were caught by the toes. At the same time the gun exploded, the barrel went backward, striking and killing the deer, the stock flew forward killing the rabbit, while the burst of the thing blew his coat off his back over the flock of quail. Now he had so much game that he didn't know what to do, so he hurried home to get something to carry it in. On the way home he jumped through the branch (stream) and caught his breeches full of perch. That is a hunter's story.

A TERRAPIN FOR A WATCH¹

There was once an old fellow who met another going along the road. In those times they told the time of day by the sun. The old man asked the other about the time, and the other pulled a watch out of his pocket and told him, "Half past ten." The old man had never seen a watch before and thought it was a wonder. Pretty soon, as he went along, he found a terrapin. He thought it looked like the other's watch, so took it along with him, putting it in his shirt. After going a little way he met a woman, who asked him about the time. "Half past twelve and scratching like Hell!" he cried as he jerked the terrapin from his shirt.

¹ A version of the same tale is current among the Creek Indians, among whom I obtained it in text in Oklahoma.

THE THREE QUESTIONS

There were once two Irish "terriers" who were brothers. One of them was offered a job by a wealthy man who promised him his pay if he would answer three questions that he would put to him. The Irishman accepted and agreed to come next day to hear the questions. When he went home and told his brother about it, his brother desired to go in his place. The next day, accordingly, the brother went in the other's place, and the man asked him, "How much does the moon weigh?" "One hundred pounds," answered the Irishman. "How do you know?" asked the man. "Because it has four quarters," was the answer. "Very well then, how many stars are there?" "A million. If you do not believe it, count them!" For the third question the man asked, "What am I thinking of?" "You think I am Pat, but I'm not, I'm Mike," was the reply. Having answered the three questions, Mike secured the job for Pat.

THE LOCAL DIALECT OF ENGLISH

Since, at the instance of Dr Boas, studies of folk-communities in various parts of America are beginning to be considered of importance to ethnology, I shall append a list of vernacular terms in use among these people. There are, of course, many more idiomatic forms of speech than I could record. The dialect in general has so many local peculiarities that people from other parts of the Middle States often find it difficult at first to comprehend. The white people of Sussex county, moreover, do not have the same idiosyncrasies, as I have taken pains to observe, although those born in the immediate neighborhood of the Nanticoke-Moors do.

Phonetic Peculiarities¹

Among the consonants *r* is pronounced with the tongue tip well curved but with no trill. Final consonants have a tendency to be dropped, as *mort*, "mortar," *orga*, "organ."

English ordinary *i* (*ai*) and *a* before *r* are given the quality of

¹ The characters recommended for American ethnologists by the Committee on Phonetics of the American Anthropological Association are used here.



NANTICOKE COFFEE MORTARS



NANTICOKE CORN MORTARS

ɔ', a close vowel almost like *a* in *fall*; for example *are* is ɔ'r, *sparrow* is spɔ'r, *fire* is fɔ'r. The impure vowel *ea(r)*, as in *heard*, *perch*, and *peart*, is pronounced i'r (i', long, as *ee* in English *queen*), whence, *pi'rtc* "perch," *pi'rt* "peart," *hi'rd* "heard." Final *a(h)* is often pronounced as *e*; *Noah* as "noe." Also *-ere* ("there, where") is pronounced -ar ("whar," etc.).

In vocabulary we observe the following local usages:

NOUNS AND PRONOUNS

mullet	mullein plant
mirkel	myrtle tree
sarsafäk	sassafras
yu'pɔ'n	wintergreen berry. (The <i>yupon</i> in the South is the name of <i>Ilex cassine</i> .)
tit spɔ'r	"tit sparrow," any small sparrow—English, chipping or song sparrow.
branch	a stream
puddle hole	a pond
savannah	a swamp in the woods
pound	the farmyard enclosure
ganzer	a woolen sweater
snouterbilly	cap that pulls down over the ears.
darts	arrowheads
piroque	a dugout canoe
booby owl	barred owl
saddy	thank you
hit	it
foreparents	forefathers
meetin'	church
shets	pine needles (probably for "sheds")
nigh	this one, here
yon	that one, there
hundred	a settlement
fat lighter }	resinous pine splints for starting a fire.
fat wood }	

VERBS AND OTHER PARTS OF SPEECH

to gear up (gə'r)	to tie, harness, lace
to chunk	to throw something, generally a piece of wood, at someone.
to work on	to tease, torment, to insist on
to over	to get over, recover
out of	descended from, belonging to
to get together	to prepare, to make
tarry	to linger
stir	to hurry
kivver	to cover
peart (pi'rt)	to be in good health, lively
pleasurin'	to be enjoying oneself, to seek pleasure.
boat ridin'	to sail in a boat
to handle	to manage
studyin'	worrying
right	very (<i>right cold</i> , "very cold")
tolerable (tolebal)	quite
make a light	to light
to reckon	to guess
just like as if	just as though
mashed	bruised
to be fifteen out	more than fifteen years of age
proggin (prɔ'g'in)	to make a living on the river by fishing and canoeing
fusty	fussy, fretful
gettin' them worked on	having work done on something
slop the hogs	feed slops to the hogs
rest your hat	take off your hat (said to a caller)
deviling'	to tease
beatenest	worst
to see after	to look after, provide for
figgerin'	planning

Several interesting phrases characterize the community:

"Are you well?" (with a rising accent) is the common greeting between acquaintances. The phrase "*on* you," "*on* me," "*on*

Isaac" in one sense denote "on your land," "on my land," "on Isaac's land," respectively.

Also "'mongst you" (amongst you) is used almost every time simply "*you*" as the subject of a verb is intended, as "'Mongst you all done?" "Are you all done?" "'Mongs' you comin'?" "Are you all coming?" "'Mongs' you got a dog (dɔ'g)?" "Have you a dog?"

APPENDIX

In a letter to the writer, Dr Amandus Johnson, of the University of Pennsylvania, who has investigated extensively the history of the Swedes in Delaware, says: "A statement in *Beskrifning om de svenska församlingars forna och närvarande tillstånd*, by Acrelius [p. 308], may possibly add to the probability of the 'Moor tradition.' Acrelius says that in 1745 'Spanish privateers tried to make a landing in the Delaware.'¹ It is quite likely that one of these vessels may have been wrecked on the Delaware coast at the time. I have seen a statement to this effect somewhere, but am unable to recall the source." Dr Johnson adds that the settlers at Fort Christiania (Wilmington) strengthened their fort at this time in anticipation of attack.

¹On the beach at Lewestown, the old name for Lewes, Delaware, iron utensils of the colonial period are often found. These, the natives believe, are relics of the traditional shipwrecked crew. It is asserted that nearly all were saved at the time, and that they dwelt on the beach for awhile.

CONTRIBUTIONS
FROM
THE MUSEUM OF THE AMERICAN INDIAN
HEYE FOUNDATION

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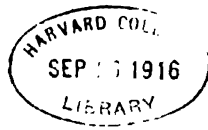
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**NOTES ON THE ARCHEOLOGY OF
MARGARITA ISLAND, VENEZUELA**

**BY
THEODOOR DE BOOY**

**NEW YORK
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The Museum.

NOTES ON THE ARCHEOLOGY OF MARGARITA ISLAND, VENEZUELA

BY

THEODOOR DE BOOY

INTRODUCTION

IT was the privilege of the writer to spend the months of February, March, and April, 1915, on the island of Margarita, off the northern coast of Venezuela, in the interest of the Museum of the American Indian (Heye Foundation), with the object of studying the cultural remains of its former aboriginal inhabitants.

After leaving New York, the writer's first stay was in Caracas, the capital of Venezuela, where he presented letters of introduction from Dr Santos A. Dominici, Minister of Venezuela to the United States, to various Government officials, who in turn provided him with credentials directing the civil and military authorities to further the interests of the expedition. In addition to these courtesies, the writer's equipment was permitted to enter free of duty. It is with great pleasure, therefore, that he embraces this opportunity to express his sincere gratitude to the Venezuelan Government, and particularly to General Ignacio Andrade, Minister of the Exterior; Dr Pedro Manuel Arcaya, Minister of the Interior; Mr C. F. Witzke, Director of the National Museums of Venezuela, and Dr Guevara Rojas, Minister of Public Instruction. In addition sincere thanks are extended to Dr Santos A. Dominici, Venezuelan Minister at Washington, and to Mr F. J. Yánes of the Pan American Union, for their courteous and influential letters of introduction.

The writer also received great aid and was shown many courtesies by the Government officials of the island of Margarita. General Juan Alberto Ramirez, State President of Nueva Esparta, the state in which Margarita lies, especially facilitated the investigations in every possible way. Grateful thanks are due also to

Mr Charles Freeman, of Porlamar, manager of the local magnesite mines, to Dr Benigno Campos, physician of Porlamar, and to General José Maria Bermudez.

SITUATION OF THE ISLAND

Margarita is situated between latitude $10^{\circ} 52'$ and $11^{\circ} 11'$ N., and longitude $63^{\circ} 47'$ and $64^{\circ} 24'$ W. The maximum width of the island is about 37 miles, and the greatest distance from north to south about 19 miles. The nearest points of approach between Margarita and Araya peninsula of the mainland, namely, Point Mangles and Point Morro de la Peña, are $12\frac{1}{2}$ miles apart. From the latter point on the mainland to the western point of Coche, the island lying in the passage between the mainland and Margarita, is a distance of eight miles, and from the western point of Coche to Point Mangles on Margarita is a distance of only six miles. It is therefore obvious that communication between Margarita and the mainland by means of canoes in pre-Columbian times was an easy matter, especially as the seas here are invariably tranquil. The accompanying map (fig. 1) is copied from chart 2035 of the United States Hydrographic Office, with the addition of the names of such pueblos and other localities as are referred to in this paper.

There is now little communication between Margarita island and the coastal towns of Venezuela, consequently the writer was obliged to travel from La Guayra (the principal port of the Republic and the port of entry for Caracas) to Cumana on a steamer of the Royal Dutch West India Line in order to connect with the Venezuelan coastal steamer for Margarita at the latter town. The port of Cumana is called Puerto Sucre. Between this port and Cumana lies a small fishing village of the Guaiqueria Indians, who at the time of the Spanish conquest inhabited the peninsula of Araya and the island of Margarita.

THE GUAQUERIA INHABITANTS

Speaking of the Guaiqueria, Humboldt says:

"The name of this tribe of Indians was quite unknown before the conquest. The natives who bear this name formerly belonged to the

nation of the Guaraounoes, of which we find no remains but in the swampy lands of the Oroonoko. Old men have assured me, that the language of their ancestors was a dialect of the Guaraouno; but that for a century past no native of that tribe at Cumana, or in the island of Margareta, has spoken any other language than the Castilian.

"The denomination of Guayquerias, like those of Peru and Peruvian,

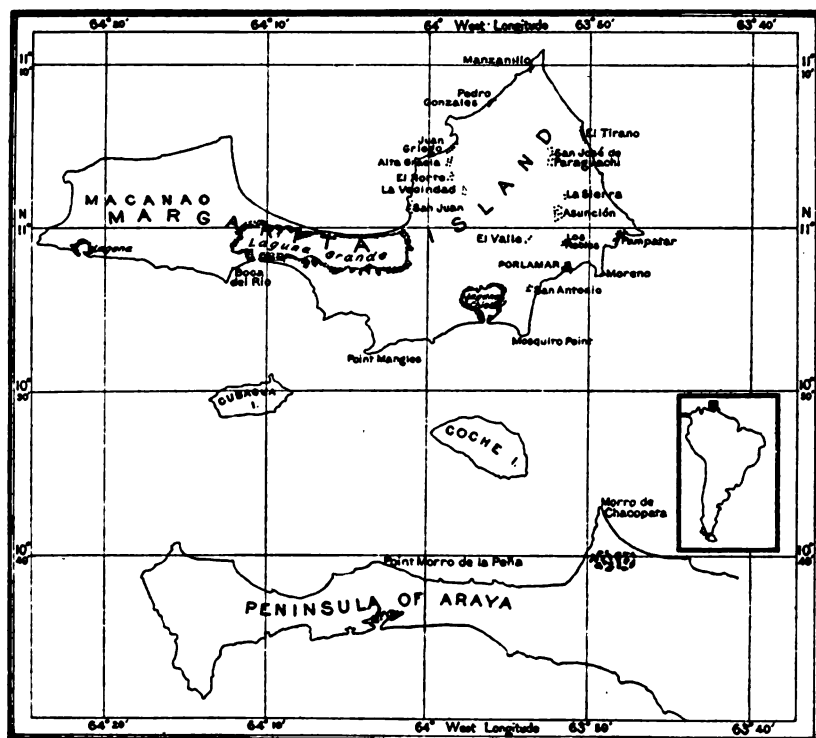


FIG. 1.—Map of Margarita Island and the adjacent mainland.

owes its origin to a mere mistake. The companions of Christopher Columbus, coasting along the island of Margareta where still on the northern coasts resides the noblest portion of the Guayqueria nation, met a few natives, who were harpooning fish by throwing a pole tied to a cord, and terminated by an extremely sharp point. They asked them in the Hayti language their name; and the Indians, thinking that the question of the strangers related to their harpoons, formed of the hard and heavy

wood of the *macana* palm tree, answered *guaike, guaike*, which signifies *pointed pole*."¹

This was written by Humboldt during his sojourn in Cumana in 1802, and it is interesting to note that the Guaikeria tribe today lives in the same localities it inhabited then and that it has neither spread nor diminished. Codazzi, in 1841, also states that the language of the Guaikeria has been totally forgotten, but that it originally was a dialect of the Guaraunos.²

HISTORY

The early history of the island of Margarita is closely allied to that of the neighboring island of Cubagua (see map, fig. 1). When Columbus coasted the peninsula of Paria on his third voyage, he passed the islands of Margarita, Cubagua, and Coche on July 31, 1498, and, strangely enough, named the first of these islands Margarita (the word *margarita* in Latin and Spanish signifies "pearl"), although he knew nothing of the pearls that were found in the surrounding waters.³ True, he met an Indian on the following day who was in possession of pearls that excited the rapacity of the soldiers accompanying the Admiral, but this would not indicate that he was acquainted with the presence of pearl-beds when he named the island.

The first settlement of Cubagua took place about 1500, when some fifty adventurers sailed from Hispaniola to exploit the pearl fisheries.⁴ These adventurers were obliged to go to the mainland to acquire Indians for work on the pearling grounds, and by their wanton cruelty undid much of the good work that was being conducted by the Franciscan friars settled at Cumana. There can be no doubt that the pearl fisheries must have been highly productive in those times, as the Spaniards in some instances paid as much as 150 ducats each for the Lucayan Indians who were captured in the

¹ Alexander von Humboldt, *Personal Narrative*, 3d ed., London, 1822, vol. II, pp. 191-192.

² Agustín Codazzi, *Resumen de la Geografía de Venezuela*, Paris, 1841, p. 249.

³ Gonzalo de Oviedo, *Historia General y Natural de las Indias*, Madrid, 1851, lib. XIX, cap. I.

⁴ Leonard V. Dalton, *Venezuela*, New York, 1912, pp. 65, 67 et seq.

Bahamas and transported to Cubagua on account of their skill as divers.¹ In fact, the fisheries were the cause of the total annihilation of the aborigines of the Bahamas. The Cubaguan settlers found, however, that the tribes inhabiting Margarita were too warlike and too well versed in the use of offensive weapons to submit to capture,² consequently the Margarita Indians were left alone. As a result, La Asunción on Margarita was not founded until 1524, whereas Nueva Cadiz on Cubagua had been raised to the dignity of self-government in 1521 and was an important town long before that time. It may serve as an illustration of the strength of the Margarita tribes to state that the early settlers lived on Cubagua, a flat, barren island, with no trees whatsoever, where no water was found, and whence the inhabitants had to send to Cumana for all food supplies and drinking water, when they would have been in as close proximity to the pearling grounds had they lived on Margarita where living conditions, while not good, were infinitely superior to those prevailing on Cubagua. Again we read³ that when Marcelo de Villalobos went to Margarita to colonize and to exploit the resources of the island, he proposed to the King of Spain the building of a fort for defence against the Indians who were "Carib and warlike." The writer's archeological researches, as will be shown, do not indicate that the remains found on Margarita resemble those of the Carib from the Lesser Antilles, and it may well be that Herrera used the name Carib merely to classify the Margarita tribes as different from the other peaceful Indians met by the conquerors in the West Indies. However, in the excavations on the island there was found a quantity of human bones that had been split in order to abstract the marrow, but whether these bones were of the Guaiqueria victims of Carib raids or were the remains of cannibal feasts of the Guaiqueria themselves, could not be determined. But it is more than likely that these split bones are evidences of a Carib raid and had been left by the invaders on the sites of the destroyed Guaiqueria villages, for we find that the native inhabitants at a later time pleaded with Alonso de Ojeda for aid against the Carib

¹ Antonio de Herrera, *Historia General*, Madrid, 1730, dec. I, book VII, chap. IX.

² Dalton, *op. cit.*, pp. 69-70.

³ Herrera, *op. cit.*, dec. III, book VII, chap. II.

of the Lesser Antilles, saying that they suffered greatly from their depredations. Ojeda in consequence went to Dominica and Guadeloupe on a punitive expedition against the inhabitants.¹ Later in his work Herrera contradicts his statement that the Guaikeria Indians were Carib when he quotes Rodrigo de Figueroa, "all Indians of these islands were Caribs excepting those of the Lucayos, Trinidad, Barbados, Gigantes, and Margarita."²

Nevertheless, even if the Guaikeria were afraid of their Carib neighbors to the eastward, the Spaniards who settled on Margarita did not find it an easy task to subjugate the aborigines of the island. Benzoni wrote in 1541 that he arrived on Cubagua and there met Pedro de Herrera, governor of the island of Margarita, who was on his way to Terra Firma, with two brigs and thirty Spaniards, there to get some slaves.³ Had Herrera found it easy to use the native inhabitants of his own colony, conscientious scruples would not have deterred him from enslaving them. And it is probably due to the warlike tendencies of the Guaikeria that they did not suffer the same fate as the other native tribes of the Antilles; moreover, "they enjoy several privileges, because from the earliest times of the conquest they remained faithful friends to the Castilians. The King of Spain names them in his public acts, 'his dear, noble, and loyal Guayquerias.'"⁴ In consequence there is today a large proportion of pure Guaikeria blood on the island of Margarita, and especially on the northern coast in the villages of San José de Paraguachi and Juan Griego. Humboldt also states that "next to the Caribs of Spanish Guyana, it is the finest race of men on Terra Firma," meaning the inhabitants of the suburbs of Cumana as well as those of Margarita. This is in strange contrast to the ill-advised statement of Scruggs, who, on hearsay, says, "The inhabitants are exceptionally indolent, stupid, unenterprising and improvident,"⁵ a description with which the present writer can by

¹ Herrera, *op. cit.*, dec. I, book IV, chap. II.

² *Ibid.*, dec. II, book X, chap. V.

³ Girolamo Benzoni, *History of the New World*, Rear-Admiral Smyth's transl., *Hakluyt Society Publications*, London, 1857, p. 3.

⁴ Humboldt, *op. cit.*, vol. II, p. 44.

⁵ William L. Scruggs, *The Colombian and Venezuelan Republics*, Boston, 1910, p. 201.

no means agree, as he found the inhabitants of Margarita—both the original Guaiquerias and the Spanish-Americans—to be particularly industrious. Owing to the absence of rivers, Margarita is bleak and barren, and hence the inhabitants are impoverished, a condition especially apparent since the pearl fisheries are no longer very productive. Altogether the Margariteños are a far more industrious class of people than is generally found in the West Indies.

It is likely that the settlements on Margarita received important accessions when Nueva Cadiz on Cubagua was completely destroyed by earthquake and a tidal wave in 1543. The Royal Treasury was kept on Margarita after the year named, and on one occasion, in 1561, was robbed by Lope de Aguirre,¹ a traitor to the Spanish Crown, after whom a small settlement on Margarita at the place where Aguirre made his landing is still called El Tirano.² In fact, this region became of such strategic and commercial importance that the island of Coche, between Margarita and the mainland, where salt deposits are found, was sacked by the English expedition under Captains Amias Preston and George Somers in 1595, and the settlements on Margarita were destroyed by the Dutch in 1662.³

It was probably soon after the latter event that the island lost its first importance, although the pearl fisheries had long since been exhausted owing to indiscriminate fishing even during the spawning seasons. There was never enough soil on the island to permit sufficient agriculture for the support of a considerable population, hence during the next century and a half, although continued as a Spanish province, Margarita was not of commercial importance and it did not figure largely in the annals of history. The island came into prominence again from 1813 until 1818 when it heroically defended itself against the greatly superior Spanish forces sent to wrest from the revolutionists their newly-declared independence. Undoubtedly the most heroic figure in this struggle of the piti-

¹ Andrés A. Level, *Esbozos de Venezuela, Primer Esbozo: La Margarita*, Caracas, 1881, p. 69.

² *Ibid.*, p. lvii.

³ Codazzi, *op. cit.*, p. 598.

fully small forces of the Margariteños against overwhelming odds was Doña Luisa Caceres de Arismendi, wife of Colonel Juan Bautista Arismendi, one of the leaders in the revolutionary movement. Margarita was captured by Morillo in 1815, but was in revolt again the next year, after the Spanish officers had broken their pledges of amnesty. Simon Bolivar, the great revolutionary leader and founder of five South American republics, visited the island in 1816 and held a conference with the revolutionary chiefs in the Pueblo de Santa Ana, now known as El Norte. The island was again invaded by the Spaniards on July 17, 1817, but despite their superior numbers they were signally defeated by the insurgent forces and finally compelled to evacuate the island a month later.¹

PHYSICAL FEATURES

Mention is made by the earliest historians that Margarita lacked a suitable supply of water. Herrera wrote that the island "does not have an abundance of water, although it is fertile of grass for cattle."² Depons mentions that "the nature of its soil condemned it to be forever a languishing establishment. Instead of vegetative earth, it is covered with a sandy surface nearly a foot in depth, mixed with hollow and rotten madrepores. Cultivation holds out no hopes."³ Scruggs states that "the first view of the island from the sea is one of matchless beauty, but it will hardly bear closer acquaintance. The soil is arid and non-productive."⁴ Speaking in general, the writer found these statements to be true; indeed it would be hard to describe the desolate appearance of the greater part of the island. In those places where various cacti are not the prevalent growth, one sees large sandy savannas covered with dry and scrubby broom-grass, with here and there a stunted tree that seems to find the struggle for life almost too great for endurance. In other parts the soil consists of indurated clay covered with decomposing micaceous rock. The roads are bare stretches of sand,

¹ Level, *op. cit.*, p. xxi.

² Herrera, *op. cit.*, Description, vol. I, chap. VII.

³ F. Depons, *A Voyage to the Eastern Part of Terra Firma or the Spanish Main*, New York, 1806, vol. III, pp. 172-173.

⁴ Scruggs, *op. cit.*, p. 201.

with not a tree to temper the glare of the tropical sun. The progress on these roads through dust a foot deep is indescribably difficult.

One can say that there are no rivers on the island, although there are three stream-beds that give promise of filling during the rainy season. The springs of these former rivers have been piped to large reservoirs in the mountains, which in turn supply water to the towns of El Valle, Porlamar, and Pampatar. Even thus, the supply is uncertain and scant under the best conditions. It is possible that in pre-Columbian times the rainfall was somewhat greater, but that it diminished after the Spanish conquest when the mountains were denuded of their timber. From the geological structure of the mountains, however, it would appear that even in early times large parts of the island presented the same bleak and arid appearance that they do today. One is especially impressed by the lack of vegetation on the hill-slopes and the consequent failure of the hills and mountains to store the rainfall.

ARCHEOLOGICAL INVESTIGATIONS

Unlike some of the other West India islands, where large aboriginal shell-deposits are found, the greater part of the investigation on Margarita was confined necessarily to surface work. The writer has already mentioned the scarcity of soil suitable for cultivation. In consequence of this, with the exception of some artifacts found on a small village-site in the northern part of the island, the entire Margarita collection consists of "surface-finds." These superficial investigations necessitated visiting all settlements in order to make inquiry among the natives with a view of learning whether they possessed any Indian objects. The Margariteños, and especially the women and children who go about gathering firewood, are remarkably keen-sighted, readily perceiving any foreign object lying on the ground, hence one may find carefully guarded stone axes and petaloid celts in many of the native huts. These people attribute the usual supernatural properties to objects of this kind, superstitions that do not differ materially from those previously described by the writer.¹ Unlike the inhabitants of some of the other

¹ T. de Booy, "Certain West-Indian Superstitions Pertaining to Celts," *Journal of American Folk-Lore*, vol. XXVIII, Jan.-Mar. 1915, pp. 78-82, and *Contributions from the Museum of the American Indian (Heye Foundation)*, vol. II, no. 3, 1915.

islands, they appear to be more willing to dispose of these stones at prices far from exorbitant; in fact, in some instances the stones were freely given.

Stone artifacts were collected in practically all parts of Marga-



FIG. 2.—An artificial reservoir at San Antonio.

rita, but it was especially on the southern coast, in the San Antonio region, that potsherds were found. Of all parts of Margarita, excepting Macanao, San Antonio perhaps presents the bleakest appearance, and one cannot observe even the smallest cultivated patch of ground. The inhabitants eke out a livelihood by raising goats, and in making charcoal from the small trees which they cut from the hillslopes. They also cure large quantities of fish, and hire themselves as pearl-fishers. The only vegetation seen on the plains of San Antonio is cacti, impenetrable in places

and of several varieties. Scattered among this growth one often finds sherds of aboriginal pottery, the only indication of the sites of former villages. Patient and laborious search rewards the investigator with little of consequence, however, for during the lapse of centuries the comparatively brittle earthenware has become greatly disintegrated.

The native guides were especially emphatic in their assurance that a large number of shallow depressions found in this part of the island were due to excavations by the pre-Columbian aborigines for the purpose of catching and preserving rainwater, and the writer is inclined to believe that their statements are correct. The reservoir shown in figure 2 has the appearance of the slope of a small hill; but by drawing an imaginary line across the shoulders of the two guides and continuing it circularly through the more highly lighted part of the picture, in the foreground, through the cactus plant, one may gain an idea of a depression of this kind. The reservoirs have a uniform depth of approximately 6 feet, with a diameter of 20 feet at the bottom and about 65 feet at the top. In some instances the soil from the excavation may still be seen around the top, as if placed there to heighten the receptacle; but in most cases this surrounding mound has become obliterated. The guides called these structures "arroyos," the Spanish term for gullies.

Mosquito Point, also on the southern coast of Margarita, seems to have been a favorite abode of the aborigines. The scenery here differs but little from that of San Antonio, although the small sand-dunes bordering the shore give it an even more desolate appearance. The coast here is ideally adapted to the needs of a fisherman, and it would be an easy matter to launch canoes and to haul them ashore. One cannot, however, give an adequate impression of the heat of these localities: the intense radiation from the sand and the stones, and the total lack of shade, must have made life here a burden indeed. It is on these shores that large deposits of the shells of the pearl-mollusk (*Meleagrina margaritifera*) are found. The writer partly excavated a few of these, but was not successful in uncovering artifacts of any description. These excavations were not difficult, for while the soil immediately back of the shore is as hard as that farther inland, the shell deposits are found only on the dunes that fringe the sea. In one of these excavations a clearly defined layer of ashes extending through the shell deposit was exposed, and while the reason for making a fire on top of the shells during the growth of the heap is not known, excavation did not afford evidence to warrant the assertion that the

shell deposit was of aboriginal origin. These shell-heaps therefore can be explained only by the belief that they resulted from early Spanish pearl fisheries. They differ from the modern shell-heaps made on the island today, in that the shells have become mixed with the drifting sand of the shore and that they have lost their luster through long exposure to the elements.

Unlike so many of the West India islands, caves are not found on Margarita, owing to the absence of coralline limestone. The



FIG. 3.—Shell deposit at Mosquito Point.

only limestone outcrop on the island is Mount Macuspo, four miles east of Laguna Chica, the whiteness of which, in strong contrast to the brownstone Cerro de la Vega, makes it visible from afar. Isla Blanca, a small *cayo*, or key, eastward from Moreno Point, is also of limestone formation, but guano-hunters who have visited it informed the writer that it contains no caves. A trip was made to Mount Macuspo and careful search conducted both at the foot and throughout the slopes in the hope of finding caves, but none were discovered.

Another region in which a number of artifacts was found is the mountainous district of La Sierra. It is here that practically all the agriculture of the island is conducted, and this is by far its most attractive part. It is certain that the shore-dwelling aborigines came here for their cassava harvest, and more than likely that here also they made their cassava bread, judging from the number of griddle fragments found in the vicinity. No kitchen-middens and no shell deposits were found, although shells scattered here and there indicated that the aborigines ate sea-food even in the interior of the island. Mention should here be made of the finding of four massive stone mortars, but no other artifacts, within a hundred yards of a small mountain spring in this district.

A fairly large number of shells and sherds were found on a bleak hillside in the mountain range between El Valle and Asunción. This hill has a very pointed crest, and the slope on which the remains were found has an angle of almost 60 degrees, which makes its use as a village-site rather remarkable. Were the summit of the hill a plateau large enough to afford space for a couple of huts, one might assume that the shells and other remains found on the slope had been washed there by rain; but the contrary being the case, no suggestion of a reason for the occurrence of the objects referred to on the slope can be offered.

The largest shell deposits, and those that showed unquestionable evidence of pre-Columbian occupancy, were discovered near the village of San José de Paraguachi. The dry bed of the Rio Viejo, about 8 feet deep and 12 feet wide, which fills during the rainy season and originates on the slopes of the Traga Plata mountain, whence it winds its way through an enclosed valley to the sea, passes through a subdivision of San José de Paraguachi, called Giri-gire. It is probable that Giri-gire was the native designation of the aboriginal village on this site, and that it has been preserved and transmitted by the Guaiqueria Indians still living in the neighborhood. The river-bed is the dividing-line of two properties, owned respectively by Señora Prudencia Carajalvo and Señor Madeira, the latter property being known as "La Estancia." On both banks kitchen-middens were found. A large field on the eastern side of the river,

the Caravaljo property, was not under cultivation during the writer's visit, but sugar-cane and cassava had been planted there at one time. There was no superficial evidence of the prehistoric occupancy of the village-site in this field, aside from some sherds and shells lying here and there, and the middens on the same side

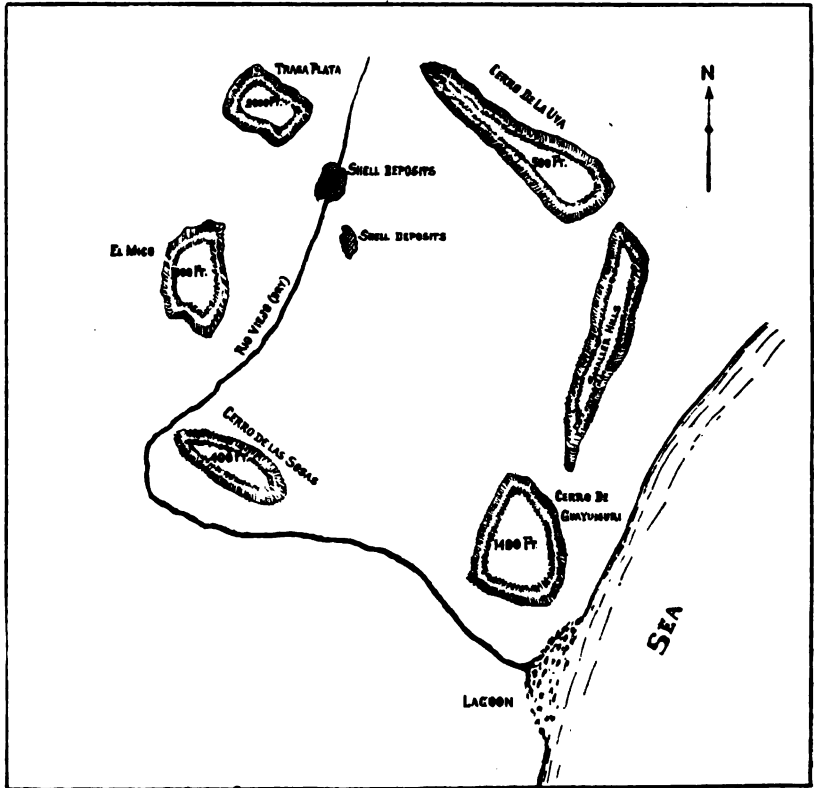


FIG. 4.—Situation of the Giri-gire kitchen-middens. (The map is not drawn to scale.)

of the stream-bed had no definable contour, consequently it was necessary to determine the extent of these remains by means of test-holes.

The middens on the western bank of the river-bed were likewise investigated, but in appearance they did not differ from those on the opposite side. The village-site extends for about half a mile along each bank, and is not more than a quarter of a mile in

width. It consists of individual deposits about 60 feet in diameter, which merge into one another. There are two or three middens in the large field of Señora Caravaljo, about three hundred yards from the river-bank above referred to. This site is not more than two miles and a half from the sea, but by following the mountain path it is about five miles from El Tirano, the nearest seaport.

The shell deposits of Giri-gire are covered by about a foot of diluvial deposit. There are no clearly defined layers of shells and ashes, all being mixed together, with an occasional sherd or other artifact. This mixture does not exceed a foot in depth, and in many instances it is even less. Very few stones were found with the midden débris, nor were bones plentiful. The deposit was so compact that shells, ashes, charcoal, bones, and artifacts adhered together in large, hard lumps. It is noteworthy that no fragments of the clay griddles, such as are found so generally throughout the West Indies, occurred in these deposits, although many such fragments were collected in other parts of Margarita. This absence of griddle fragments from the Giri-gire middens, however, is not necessarily an indication that the site was occupied by Indians of a culture distinct from that of the aboriginal occupants of sites in other parts of the island; for the two-pointed stones, later to be mentioned, which appear to be typical of the pre-Columbian inhabitants of Margarita, were found in large numbers on the Giri-gire site as well as in other parts of the island.

A number of fragments of human bones, almost invariably split as if to abstract the marrow, were found. As above pointed out, the writer believes that these bones are the evidences of a raid on the Guaiqueria by Carib from the islands to the eastward, who held their cannibal feast on the site of the destroyed village of their victims.

The writer is indebted to Mr L. P. Gratacap, of the American Museum of Natural History, for the identification of the following sea-shells found in the Giri-gire kitchen-middens. It will be noted that about ninety-five per cent. of the shells are of one species and possibly four per cent. of another, while the remainder were found in extremely small numbers.

<i>Mytilus achatinus</i> , Lamarck	95%
<i>Tivela mactroides</i> , Born	4%
<i>Fissuridea virescens</i> , Sowerby	1%
<i>Murex rosarium</i> , Chemnitz	
<i>Purpura floridanus</i> , Conrad	
<i>Purpura patula</i> , Linnæus	
<i>Purpura hamastoma</i> , Linnæus	
<i>Fasciolaria tulipa</i> , Linnæus	
<i>Strombus gigas</i> , Linnæus	
<i>Cypræa exanthema</i> , Linnæus	
<i>Livona pica</i> , Linnæus	
<i>Melongena melongena</i> , Linnæus	
<i>Chama macrophylla</i> , Chemnitz	
<i>Cardium muricatum</i> , Linnæus	

Besides these shells, some barnacles and many stems of madre-pore coral were found.

In addition to the human bones, a number of bones of lower mammals were found, some of which were kindly identified by Dr F. A. Lucas, Director of the American Museum of Natural History. The identified bones are those of the peccary (*Pecari* sp.) and the deer (*Odocoileus* sp.). Turtle-bones also were found, and some bones that resembled those of birds, although the identification of these is uncertain. Besides the above, some skeletal remains of fish, amongst which are those of the bluefish (*Pomatomus saltatrix*), were recovered.

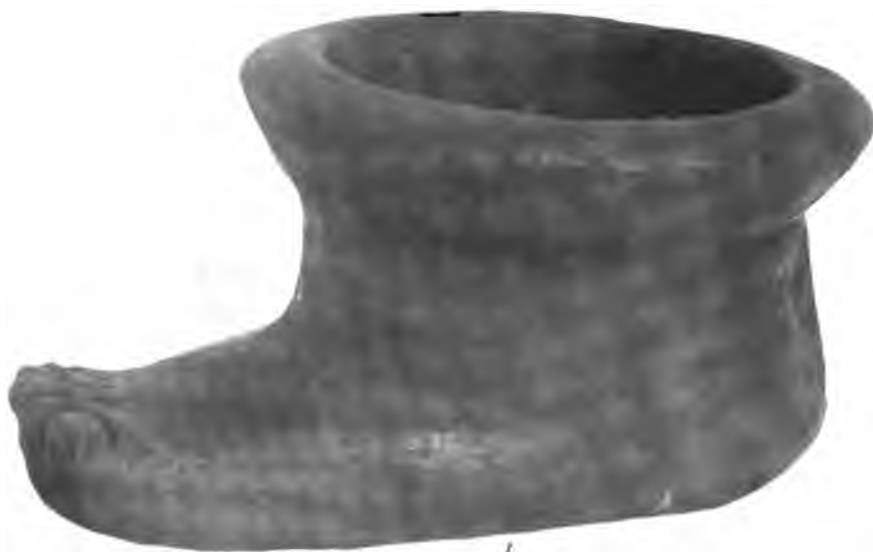
THE COLLECTIONS

While a large number of pottery fragments were found in Margarita, the writer was successful in obtaining only two entire vessels of pre-Columbian origin. These are shown in plate I. Of the two, *a* was brought by a woman who said it had been discovered by her son while cutting firewood on top of one of the mountains bordering Cerro de la Vega. A subsequent visit to this locality resulted in finding many sherds, but no more entire vessels. The receptacle is of dark-brown ware, about a quarter of an inch thick. It stands 5 inches high, and the diameter of the mouth is 4 inches. An inspection of the sherds from the island indicates that this type of small pitcher was not uncommon.

The other entire vessel (pl. I, *b*) is of a type entirely foreign to either the West Indies or the adjacent mainland of South America.



a



b

PREHISTORIC POTTERY VESSELS

It stands $2\frac{1}{4}$ inches high, is $4\frac{1}{2}$ inches long at the base, and $3\frac{1}{4}$ inches in diameter at the mouth. The inside depth of the vessel is almost 2 inches. This "foot-jar" of heavy, dark-brown pottery, is well modeled, the five toes with their nails and the ankle of the foot being clearly represented. No other sherds that indicate the existence of other vessels of this type were found. The foot-jar was found in excavating one of the Giri-gire kitchen-middens. Although far superior in design, in type it resembles the foot-jars from Oaxaca, Mexico.



FIG. 5.—Shallow bowl from a Giri-gire kitchen-midden.

From fragments found, the vessel shown in figure 5 was partly reconstructed. This shallow, elliptical bowl, which originally had a length of 11 inches, a width of 8 inches, and stood 2 inches high, is made of dark-gray ware of a thickness of three-sixteenths of an inch. The outer surface is plain, but the interior is decorated with

shallow, incised, circular lines. The fragments of this specimen were recovered from one of the Giri-gire middens.

Excavation in the Giri-gire middens produced also a number of pottery heads similar to those from the West Indies, and also more or less allied in type to some of the heads collected by Dr Fewkes at Erin Bay, Trinidad.¹ It should be noted that most of the heads illustrated by Dr Fewkes are painted, while the Giri-gire examples do not now indicate painted decoration, although it may be that originally they were so ornamented. A close comparison of head *c* of our plate II with head *f* shown in plate XVII of Dr Fewkes' article, and of heads *e* and *f* of plate II of the present paper with heads *c* and *e* of plate XIX of Dr Fewkes' paper, will reveal this similarity. The writer recovered by excavation a large number of pottery heads on the St Bernard estate near Cape Mayaro, Trinidad, where he spent four months in archeological research after the termination of the Margarita work, and these show even greater similarity to the Margarita specimens.²

Little information can be given in regard to the other heads illustrated in plate II. Often the identification of such pottery heads as representing certain animal forms appears to be fanciful. More than likely *b* and *f* represent human heads, while *e* may be supposed to have been intended to portray the head of a bat.

The manner in which these heads served as handles for the vessels to which they were attached is shown in plate II, *h*. Frequently the heads are hollow and served as rattles, containing a number of clay pellets. Another type of handle is shown in plate II, *g*, of which a number of examples were found. Plate II, *a*, exhibits one of the supports of a vessel, shaped in the form of a human foot, with incised lines representing the toes. The ankle is clearly shown.

The majority of sherds found throughout Margarita indicate that the typical vessel was severely plain, having indeed no decoration whatsoever. It may of course be possible that the surface of

¹ J. Walter Fewkes, "Prehistoric Objects from a Shell-heap at Erin Bay, Trinidad," *American Anthropologist*, N. S., vol. XVI, no. 2, April-June 1914, pp. 200-221; also in *Contributions from the Heye Museum*, vol. I, no. 7, 1914.

² The writer hopes to publish the results of his researches in Trinidad in the near future and to incorporate a detailed account of this similarity.



HEADS OF POTTERY



HANDLES OF POTTERY

some of the vessels was decorated with painted designs, but that exposure to the elements has caused their disappearance. The usual incised lines with a small impressed pit at their extremities were found in no instance. Figure 6 illustrates three sherds which may

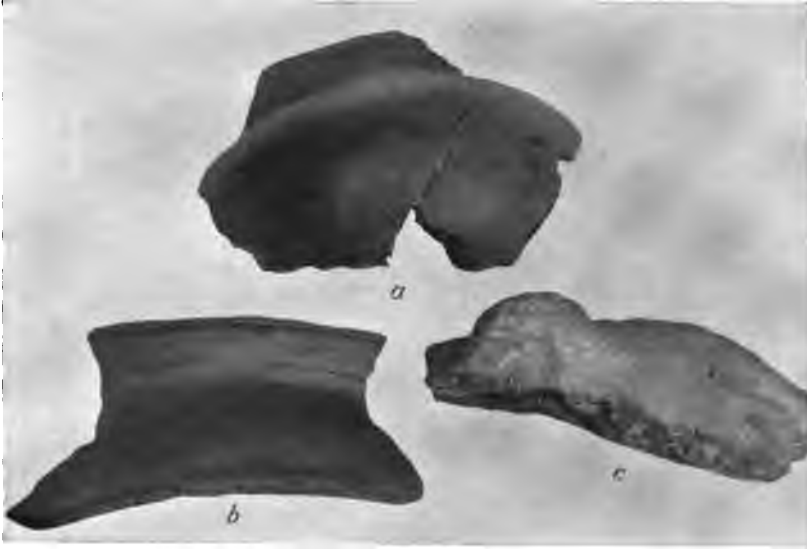


FIG. 6.—Potsherds.

be regarded as typical of all specimens of this kind collected. Of these, *a* is a fragment of a globular vessel with a perpendicular rim; *b*, a fragment of a larger vessel with a diameter of about 16 inches and a height of about 12 inches, and with a slightly outcurving rim; *c* is of a different kind of pottery, the clay of which was plentifully tempered with minute stone chips and crushed shell. It will be noted that this fragment is far thicker than the others. Probably half of all the sherds found were of this kind of ware. The vessels made of this seem to have had straight sides, and, surrounding the rim, frequently had small lugs of the same kind as the one shown in specimen *c*.

Three fragments of vessels (fig. 7) were found in the Giri-gire kitchen-middens that were colored with red, white, and brown pigment, applied to the ware before firing. Probably six hundred

sherds entirely similar to these were found in the middens on the St Bernard estate in Trinidad, suggesting that the Carib raiders previously mentioned left some of their pottery on the site they had destroyed. This suggestion is well worthy of consideration when it is remembered that other sherds of exactly the same kind of pottery have been found on some of the Carib islands, as Carriacou and St Vincent, and are now in the Museum of the American Indian. Sherds of this variety have not been found anywhere in Trinidad, however, except in the middens near Cape Mayaro.



FIG. 7.—Sherds of painted pottery.

The writer figured a fragment of a clay griddle from Jamaica in a previous article on the archeology of that island,¹ and in another paper² mentioned a similar discovery in Santo Domingo. Clay griddles were found likewise in Margarita (fig. 8), and a considerable number of fragments were collected on that island. These do not differ in any respect from the sherds in the collections of the Museum of the American Indian from Cuba, Jamaica, Santo Domingo, Trinidad, and several of the Lesser Antilles. It is interesting to

¹ "Certain Kitchen-middens in Jamaica," *American Anthropologist*, N. S., vol. xv, no. 3, July-Sept. 1913, p. 434; also in *Contributions from the Heye Museum*, vol. 1, no. 3, 1913.

² "Pottery from Certain Caves in Eastern Santo Domingo," *ibid.*, vol. xvii, no. 1, Jan.-Mar. 1915, p. 94; also in *Contributions from the Heye Museum*, vol. 1, no. 9, 1915.



a



b

STONE MORTARS

note the general distribution of this type of artifacts throughout the islands, regardless of whether they were inhabited by the Carib or the Arawak.

A number of massive mortars were found in Margarita, two of which are illustrated in plate III. The first and largest specimen (*a*) is 25 inches long, 13 inches wide, and averages $5\frac{1}{2}$ inches in height. The cavity, as in all the Margarita mortars, is elongate.



FIG. 8.—Fragment of a clay griddle.

Specimen *b* is much smaller and more disc-shaped; its length is 16 inches, width $11\frac{1}{2}$ inches, and average height 3 inches. The cavity is elongate, as in the others, and the commencement of another cavity, at a right angle to the first, can be seen. With many of these mortars were found handstones, of which three are shown in figure 9. The grinding surface of these stones is flattened, while the side which was held in the hand is convex. The length of the examples here shown is 6 inches, although a number were collected that are about an inch longer. A considerable number of handstones were found throughout the island.

To the present time, there is no authentic record of the finding of a single chipped arrowpoint in the West Indies. The writer therefore

was greatly interested in acquiring from Margarita the chipped quartzite arrowpoint, an inch and a quarter in length, shown in figure 10. No similar specimens were discovered, although one or two chipped flints were found. That the Guaiqueria Indians used



FIG. 9.—Handstones.

harpoons or arrows is proved by their name, derived from *guaike*, meaning "pointed pole," as already mentioned. Furthermore, the writer acquired two arrowshaft rubbers on the island: these are



FIG. 10.—
Chipped
quartzite ar-
rowpoint.

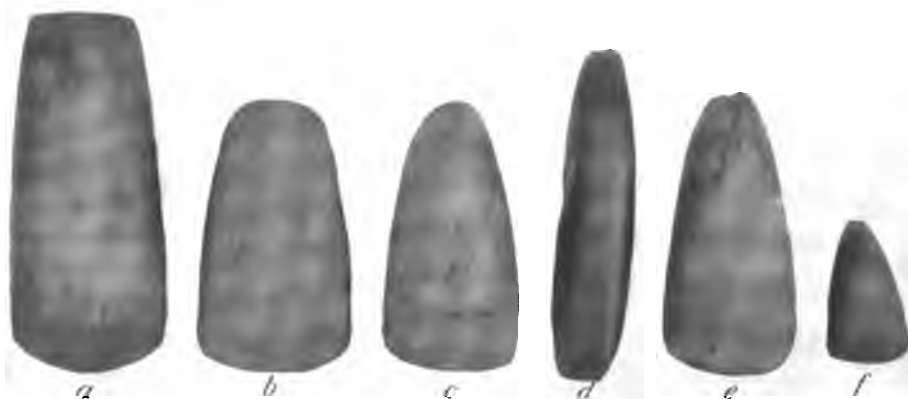
illustrated in figure 11. The tip of the arrowpoint shown in the illustration is broken off, and the point itself is in no sense remarkable. Nevertheless, the value of this unique specimen is evident, and it would be interesting to know whether similar chipped points exist on the adjacent mainland. The two rubbers referred to are of coarse-grained stone and are not unlike specimens from the United States.¹ The Guaiqueria Indian probably tipped his arrow with the poisonous spine of the sting-ray, which is still used extensively

for the same purpose by the primitive tribes on the northern coast of South America.

¹ "Handbook of American Indians," *Bulletin 30, Bureau of American Ethnology*, Washington, 1907, pt. 1, p. 92.



TWO-POINTED OBJECTS



CELTS OF STONE

Another problem was presented by the finding of a large number of two-pointed stones of the type shown in plate iv. These objects are $1\frac{3}{4}$ to $2\frac{1}{4}$ inches in length, and one measures $2\frac{3}{4}$ inches. They are either elliptical or circular in cross-section; most of them are of the latter form. The writer knows of only a single two-pointed stone of this type from elsewhere in the West Indies; this is from Grenada



FIG. 11.—Arrowshaft rubbers.

and is also in the Museum of the American Indian, which likewise possesses a few similar stones from California. While these two-pointed stones are still to be regarded as problematical objects, attention should be called to the fact that if one of them is twirled between the fingers on a smooth surface, it will spin for a considerable time; hence it is not impossible that they may have been used in games or in ceremonies of divination. Nevertheless these stones present an interesting problem in West Indian archeology, both from the comparatively large number (twenty-eight) that were found in Margarita, and from their shape.

The usual types of West Indian celts were also found in Margarita. These vary from the flat-topped example (pl. iv, *a*) to the

smallest petaloid form (*f*). These celts do not differ from those found on any of the other islands, although all types, including the



FIG. 12.—Massive axe.

comparatively rare spindle-shaped celt (*d*), were gathered. A few celts from Margarita are made from the lip of the conch.

A number of massive axes, of which some are shown in plate v, *d*, *e*, *f*, were found; these differ from the axes found on the islands to the eastward. These implements have a smooth, polished rounded head, and a shallow groove to facilitate hafting. Most of the specimens show signs of use. They range in length from $6\frac{1}{2}$ to 7 inches.

The Guiana or Brazil type of axe, of which specimens are shown in plate v, *a*, *b*, *c*, was also found in Margarita. In the Museum of the American Indian are a few



STONE AXES



WORKED CONCH-SHELL LIPS

examples of this type from Trinidad, one of which has been figured by Dr Fewkes,¹ and there is also a specimen from Grenada. The area of the surface where the axe was lashed to the handle is slightly concave in order to facilitate the fastening, a feature common to axes of this form. It has been the custom of the writer to refer to these axes as of the Guiana or Brazil type, as they are found in large numbers in the great region between the mouths of the Orinoco and the Amazon. The axes have also two notches through which the lashing has passed round the handle. Specimen *a* shows evidence of secondary use, as if employed as a rubbing stone. The length of these axes ranges from $4\frac{1}{2}$ to 5 inches, with the exception of one from Trinidad which is only 3 inches long.

Still another axe of massive type was found in Margarita; this is shown in figure 12. In outline it approaches *d*, *e*, and *f* of plate v, but the groove for the hafting is accentuated, and the length of the implement is 8 inches. The example illustrated is the only one of its kind collected in Margarita, but one like it was procured from Rio Caribe on the peninsula of Paria. There is also an axe of this type from Trinidad in the collections of the Museum of the American Indian.

The only axe from Margarita that approaches the types found in the Lesser Antilles is that shown in figure 13. This miniature implement is only two inches long, but it is identical in form with a number



FIG. 13.—Miniature axe.

of larger axes from St Vincent, Grenada, and some of the other islands of the Lesser Antilles. A groove surrounds the butt-end, and another groove, not shown in the illustration, extends across the proximal surface.

Only a few objects for personal adornment were found in Margarita. One of these is a small amulet of Amazon stone (fig. 14), which probably represents a highly conventionalized animal form.

¹ J. Walter Fewkes, *op. cit.*, p. 216.

The amulet is $1\frac{3}{4}$ inches in length, is of excellent workmanship, and is drilled for suspension. A shallow pit on each side, above the perforation, may represent the eyes, and under the perforation



FIG. 14.—Amulet.

another pit may have been designed to indicate a nostril. This is the only specimen of Amazon stone found in Margarita.

A number of worked conch-shell lips, which may be included among the personal ornaments, were found. Two of these are shown in plate vi, *c*, *d*. These objects were used probably as pendants. They are far cruder than specimens *a* and *b* of plate vi,

also in the Museum of the American Indian, from the Andes region of Venezuela, but are similar in type. The reverse side of *b* is elaborately carved with designs representing human heads; the Margarita specimens are all like specimen *a*, which is devoid of carving. Unlike those from Margarita, the Andean pendants are drilled for suspension; the Margarita specimens, however, narrow slightly at the point where the tongue joins the body of the pendant. A number of pendants made from the lips of conch-shells are figured by Giglioli;¹ that shown in his figure 4 especially resembles those from the Venezuelan Andes above referred to. In all eleven pendants of the kind figured in plate vi, *c*, *d*, were collected in Margarita.

A single object of hematite (fig. 15) was found in Margarita; it measures $1\frac{3}{4}$ inches in length, is plummet-shaped, and has a small groove at top and bottom.

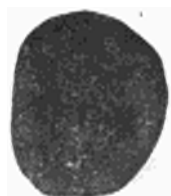
A fragmentary bell-shaped pestle (pl. vii, *a*), but no entire specimen of this class, was found. This pestle, which is 5 inches in

¹ E. H. Giglioli, "Di certi singolari pettorali in pietra ed in conchiglia precolombiani dalla Venezuela, probabili effigi del dio Vampiro degli antichi indigeni dell' America centrale," *Proceedings International Congress of Americanists*, 16th Sess., Vienna, 1908, vol. II, pp. 321-330, Vienna, 1910.



PESTLE (*a*) AND HAMMERSTONE (*b*)

STONE OBJECT OF UNKNOWN USE (*c*), AND HAMMERSTONE (*d*)



RUBBING STONES

length, recalls similar objects from St Vincent and Grenada, in the Museum of the American Indian.

An unusual hammerstone, 7 inches long, with two grooves, is shown in plate VII, *b*. This form of hammerstone is probably unique. One of the surfaces of the longer axis is slightly flattened, as if to facilitate the lashing of a handle.

In the same plate (*c*) is figured a stone object of unknown use, 5 inches in length, with two shallow pits, one of which is shown in the illustration. The hammerstone (*d*) shown in this plate is slightly grooved round the middle and has a shallow pit at each end. The length of this hammer is $2\frac{3}{4}$ inches, the diameter $2\frac{1}{2}$ inches.



FIG. 15.—Hematite object.

A number of rubbing-stones are shown in plate VIII. Of the smaller stones, *c*, *d*, *e*, and *f* resemble circular discs and range in diameter from one inch to an inch and a quarter. Another rubbing stone (*a*), shaped like a petaloid celt, is 2 inches long and has a rubbing surface on each side of the point. Still another (*b*) is $2\frac{3}{4}$ inches long, and was probably used for smoothing pottery.

It has been seen from the foregoing description of the archeological objects from Margarita that a number resemble specimens from the Carib islands to the eastward. It should not be assumed, however, that the ancient inhabitants of Margarita were necessarily of the same stock as those of the latter islands.

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